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NORTHWEST MEDICINE

January, 1963
Volume 62—Number 1

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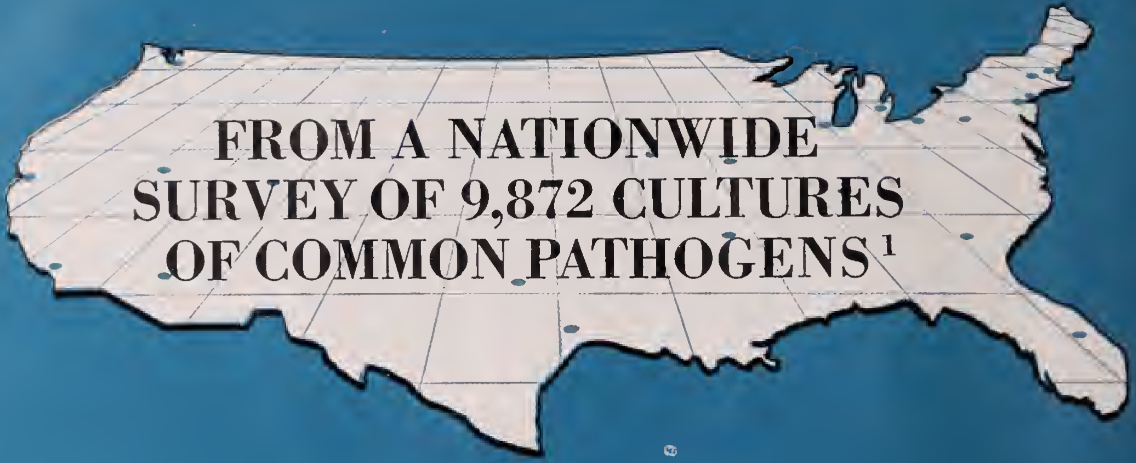

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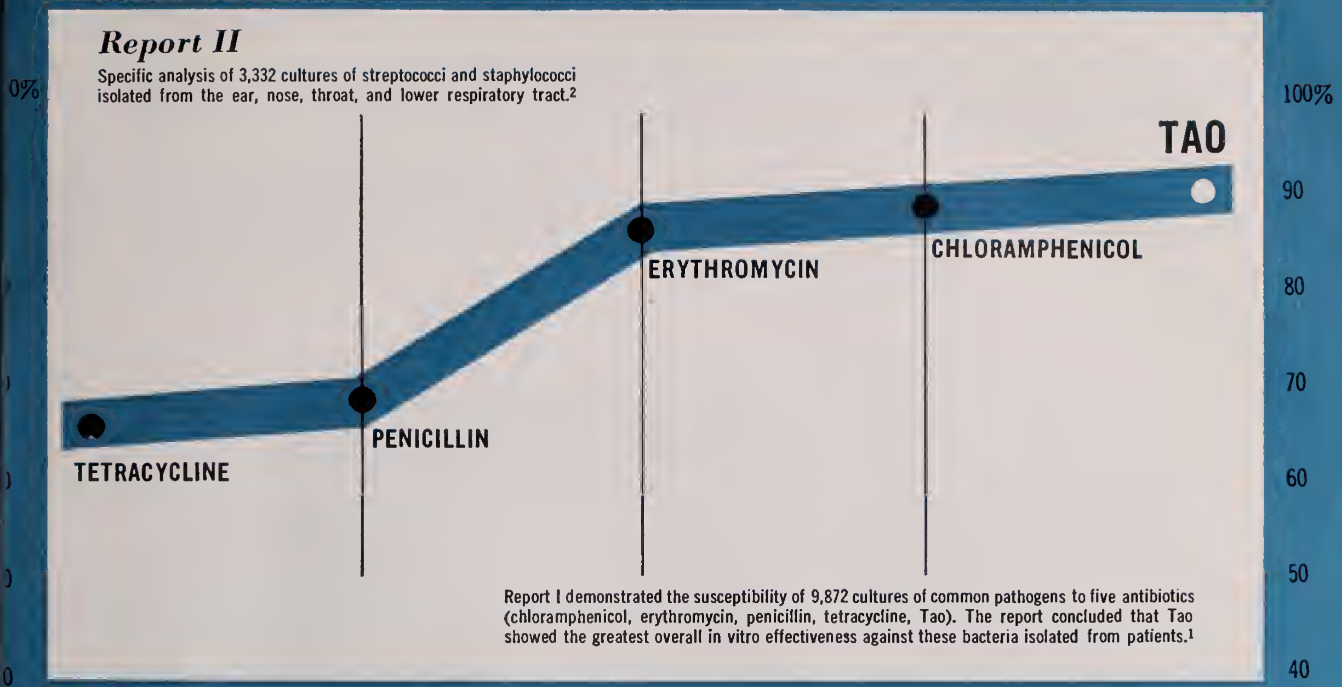

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Report II

Results of Bacterial Susceptibility in 3,332 Respiratory Pathogens

References

1. "Bacterial Susceptibility Patterns: A Geographic Survey." Fowler, J. Ralph, M.D., and Watters, John L., M.D. Scientific Exhibit presented at the Annual Meeting of the American Society of Clinical Pathologists, Chicago, Ill., August 31 to September 9, 1962. 2. Fowler, J. Ralph, Watters, John L. and Levy, Arthur M.: Bacterial Susceptibility Patterns as Related to Geographic Variation and Anatomical Source. In press. 3. English, A. R., and Fink, F. C.: Antibiot. & Chemother. 8:420 (Aug.) 1958. 4. English, A. R., and Fink, F. C.: Antibiot. and Chemother. 11:648 (Oct.) 1961.

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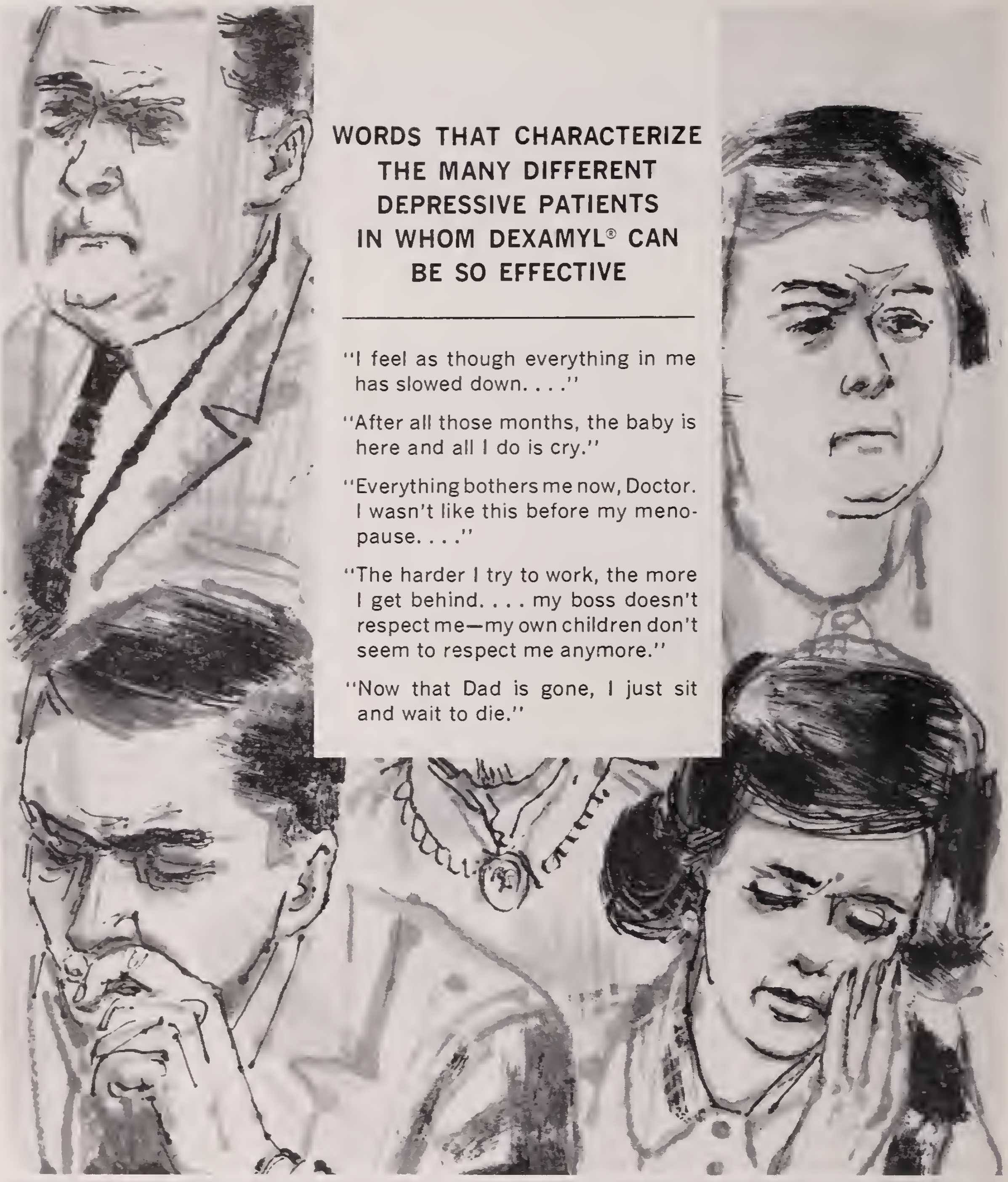

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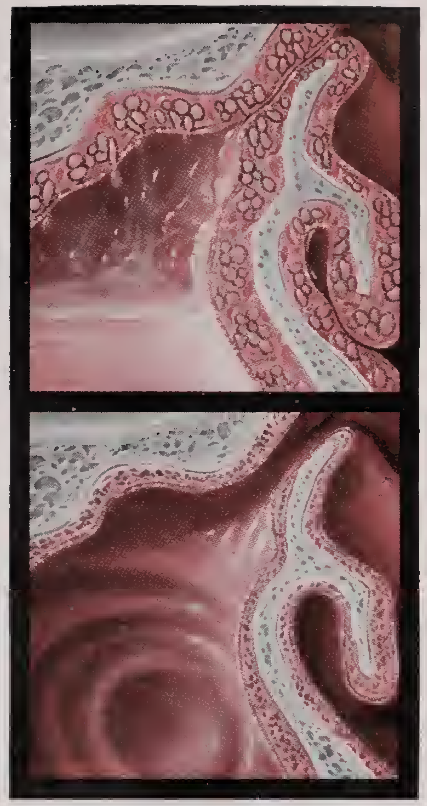

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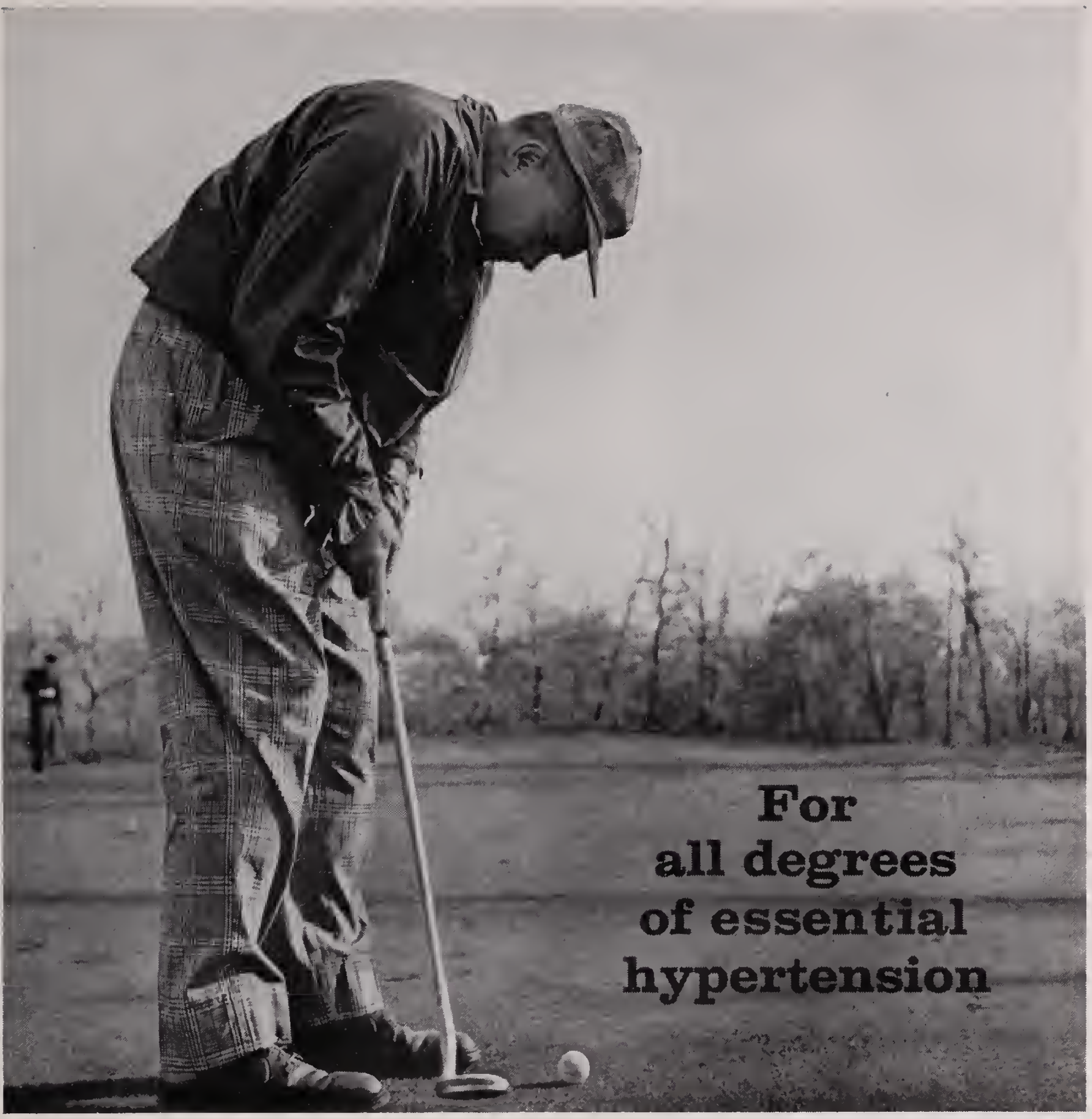

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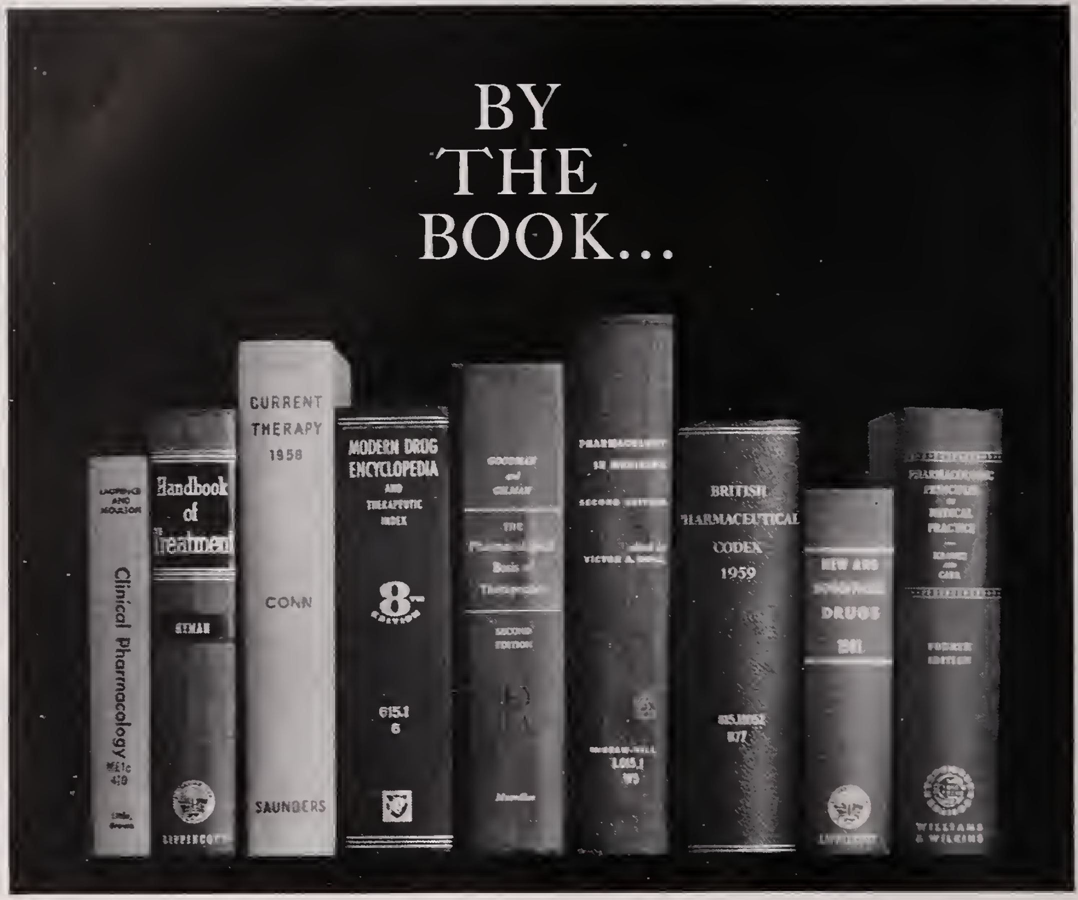

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We Are Sixty

Sixty years ago this month the first issue of NORTHWEST MEDICINE appeared. It was a neat little magazine, remarkably well arranged and printed, of 64 pages, six by nine inches in size with departments of Original Contributions, Clinical Notes, Editorials, Reports of Society Meetings, and Recent Progress in Medicine and Surgery. There were articles on eclampsia, tumors of the kidney, physical degeneracy due to environment, calculus of the kidney and ureter, and a case of cortical blindness with operation and recovery. In the department for recent progress there were reports on pneumonia, diabetes, typhoid fever in children, pathology of katabolism, gunshot wound of the thorax involving the heart, appendicitis, suspension of the uterus, resuturing of abdominal incision in suppurating cases, dermatitis hiemalis and four forms of exfoliative dematitis. It is obvious that the originators had done a great deal of planning and were determined to establish the new journal as a quality publication.

The magazine was the result of efforts by two men who had more vision than their confreres. First business manager was J. B. Eagleson and first editor was Clarence A. Smith. They proposed the magazine, selected its name, launched it, nurtured it, and actually financed it until advertising revenue finally made it a successful business operation.

Dr. Smith was fond of telling about the unanimous and enthusiastic rejection of the idea when he and Dr. Eagleson proposed that the new journal be sponsored by the King County Medical Society. One member remarked, "None of you fellows has had any experience in medical journalism. Your journal will be a failure, with indebtedness that will bankrupt the society."

In spite of this dire warning, the journal has never been in financial jeopardy, its assets have increased through the years and Dr. Smith, who was its editor for the first fifty years, became known throughout the country as an able scholar and, finally, as the dean of medical editors in the United States. He worked actively until he was ninety and died, in 1953, at the age of ninety-two.

When first issued, NORTHWEST MEDICINE was under nominal sponsorship of the Washington Medical Library Association. Circulation was on a direct, subscription basis until 1906 when the Washington State Medical Association made it the official journal and put all members on the mailing list.

In 1908, during a meeting in Portland, it was suggested that a medical journal should be developed under control of the state medical associations of Oregon, Washington and Idaho. This plan was supported at Walla Walla in September and at Boise, October 9.

Organization of the new group was planned at a meeting in the Arlington Club, Portland, January 19, 1909 and the first regular meeting of what was then called the Northwest Medicine Publishing Association was held in Pendleton, September 28, 1909. Sponsorship of the journal was transferred to the new association.

In January, 1911, an editorial announced the fact that the Utah State Medical Association had asked to be included. Although never given voice in management, Utah continued to use the journal as its official publication until July 1923.

The publishing association was not incorporated until 1918, when, on March 15, an agreement to incorporate was signed by ten physicians. Articles of incorporation were filed May 4, 1918 and a certificate was issued May 20. The signers were C. A. Smith, J. B. Eagleson, F. S. Bourns, L. R. Quilliam, M. G. Sturgis, F. S. Wiltsie, F. L. Horsfall, R. D. Forbes, J. S. Thomas, and H. V. Wurdemann.

Montana adopted the journal as its official publication in August, 1923 but continued only until 1926.

Alaska participated from 1945 until 1959, when the Alaska Territorial Medical Association had become a state association and initiated its own excellent quarterly, *Alaska Medicine*. Notable during that period were the contributions of Milo Fritz, president of the association, 1955-56.

Many names well known throughout the Northwest and the nation have appeared on the masthead during these sixty years but those of Smith and Eagleson must always head the list. In spite of difficulties and discouragement, their foresight and their devotion gave this area a much needed medium of communication, a stimulus to progress, and a mirror in which has been reflected the excellence of medicine in the Northwest. Given the support of all concerned the journal they started will, we trust, continue to serve for many years to come.■

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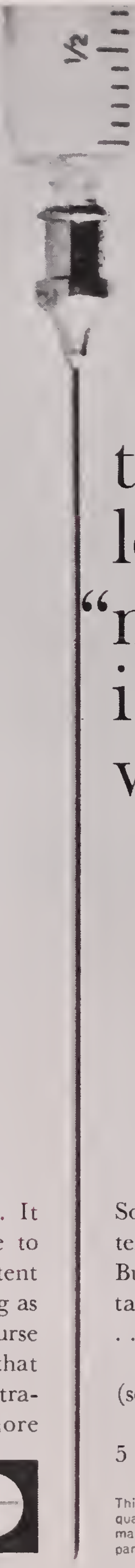

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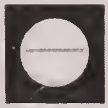

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Public Image of the Doctor

FRANCIS J. BRACELAND, M.D. SC. D. Hartford, Connecticut

Although the science of medicine is bringing miracles undreamed of a few years ago, there has been serious deterioration in the public image of the doctor who expertly, and sometimes brusquely, uses these benefits at the bedside. The miracles of electronics and chemistry are not enough. The true healer must use them but he must also care for the patient to cure him. Psychiatry, running counter to the trend of science without warmth, has gained public approval and acceptance while others have lost. Thus the highest ideal, and the brightest public image, may be restored when the physician once more is the teacher, the healer, the friend.

I

We are meeting here at a time when American medicine is at one of its highest points scientifically but at one of its lowest points in this century in its public relations. Why and how we have gravitated to this position is a story too involved to go into here but one thing we can be sure of is that we are in the rapids at the moment and an honored profession is in danger. Currents are moving which at any time might engulf us.

As I address you regarding our status and our public image, I espouse no cause, take no sides other than that of a physician, and have nothing to sell you except the honored profession which you and I practice. The only ulterior motive to my discussion might be to advocate again the warm dedicated care of the sick which has always been the mark of the true physician.

the influence of society

In an address given to the Association of American Physicians a decade ago, Alan Gregg noted that "human societies make their healers and the healers then make the doctrine." When the doctrine is valid, it begins to make true healers of the healers, and the healers then, using the truth, begin to remake the society that made them. This sounds complicated, but it is simply a medical rendition of John Donne's statement that "no man is an Iland." The influence of medicine, in other words, extends well beyond the day to day effort of prevention, treatment and alleviation of disease. There are vast social implications in our practice, as is becoming more obvious today. Moreover, social forces participate in the production of human illnesses and can be employed in their treatment. The understanding and use of this social or this interpersonal element is a major ingredient in the art of medicine.

Thus, there are forces at work outside the fields of science and medicine which seem to be destined very shortly to exert a powerful influence on both. These forces are in the social and economic spheres, areas traditionally avoided by scientists and physicians alike and considered to be of little concern to them. At present it is evident also that man is entering an era of the greatest change and probably the greatest achievement that he has ever known. Something is happening to the whole structure of human consciousness and a fresh kind of life is starting. Luna, the moon, which has always been associated with psychiatric conditions now becomes more respectable as the nation spends billions of dollars in trying to reach it, as some wag has said, probably trying to get into the lunar bin.

Dr. Braceland is Psychiatrist in Chief, Institute of Living, Hartford.

Read before a special luncheon meeting, Washington State Medical Association 73rd Annual Convention, Spokane, Washington, September 17, 1962.

In the face of all of this upheaval and actually shaken by it, no one can remain indifferent. Certainly we, in the practice of medicine, cannot remain indifferent for if we do we are lost—hence, this discussion today, an examination of what military men would call our present posture—an examination of our public reflection—our image.

good care — poor image

This is a new venture—the necessity of examining the public image of the doctor. The word itself is a noun, derived from the Latin *imago* or the French *imager* and it has various meanings. The one which concerns us here encompasses "a mental picture of something," "an idea," "a conception or impression," or "a delineation." It is strange that we must turn our attention to our image now, with medicine at its highest scientific peak, but it is true, we must, for collectively we have apparently slipped a notch in the affections of people. It seems as though the patient is much better, thank you, but the doctor's condition is much worse. Criticism of the medical profession in itself is not new; in fact, it has been its lot since its earliest beginnings, but it is unusual for criticism to be rife in a time when medicine has reached its highest scientific heights and is governed by its highest standards.

In the 17th century in some places the popular medicine was sold like merchandise in the crowded market place and in the drawing rooms of the rich for a high fee. We can understand medicine being criticized then and Moliére criticized it; in fact, he satirized the whole medical profession in his comedies: "Doctors Dracoirius (father and son) explained their approach as follows: 'Treat all patients alike with a mixture of old fashioned remedies, plenty of enemas, purging and blood letting, along with cunning psychology.'" *Le Malade Imaginaire* states in other words what Pliny had said long before: "Nearly all men died of their remedies, and not of their illnesses."

Things were much the same in early America. There were few physicians to treat the sick; they had to be imported from Europe and, because of the harsh, unpleasant conditions of life, most of them went quickly back to where they came from. With no medical schools until shortly before the Revolution, it was necessary for prospective doctors to go to Europe or to seek service as an apprentice. The first North American medical degree was awarded in 1723 by Yale to a London practitioner, named Daniel Turner. His enemies suggested the M.D. stood for "*multa donat*"—he gave them plenty. A great majority of American physicians emerged from the apprentice system. As a matter of fact, anyone could practice medicine and quacks abounded. When licensing began, it was rumored widely that it was done to keep the circle small and select, rather than to raise standards.

We have no time to go further here into our background. We can see the reasons for criticism at each of these periods, even in the days of the gold headed cane. The London pharmacopeia of the time makes one ill to think of it, and worse, during the great plague of 1665 most of the physicians fled to the country—even the great Sydenham.

the faded picture

The picture of our ancestors which inspired many of us, however, is the one of the doctor painted by Sir Luke Fildes. In this the dedicated, bearded doctor sits immobile and watches a child—the ideal picture of medical concern for a patient. Critics have pointed out, of course, that there is in this portrait a "kernel of therapeutic impotence and frustration. Neither the clinical acumen of the physician nor his patient's trust and confidence can stay the proliferation of the hemolytic streptococcus."[1] But today the doctor can do so for he does have potent weapons in his armamentarium. He is carefully examined and regulated; his scientific acumen is at the highest peak; and yet there are critical articles in newspapers and magazines and distressed editorials in professional journals expressing the fear that the "image of the American physician in the public mind, and especially as portrayed in the public press, has undergone a deplorable change." Editorial writers see us depicted in various uncomplimentary roles by government and labor orators and, while much of the criticism is exaggerated and some of it entirely unwarranted, the picture of the doctor as portrayed by Sir Luke Fildes has faded and we have gone down several pegs in the regard in which we were once held.

This drop in the estimation of our fellow citizens does have a slight schizophrenic tinge about it. Most people have great confidence and affection for their own personal physicians and this they readily affirm. On the other hand, it is just as obvious that the opinion which is held of the medical profession as a whole has taken a precipitate drop. In fact, the largest of the professional medical societies has been put in the unenviable position of being a public whipping boy and its efforts to right this situation have thus far not been too successful. If you believe we are exaggerating we might quote for you a few of the worried statements and editorials in our best medical journals. Let us start with that of one of your own colleagues:

> The image of medicine in the public eye is not so much concerned with building institutes, or public pronouncements of our accomplishments, but more with the skill, compassion and human understanding we bring to the sick and injured. In addition, a physician is instinctively assumed to be a man of dignity, scrupulous morals and principles and education. That the public seems to feel we have fallen short of this image of us is evident. We are worried about this and all earnest physicians are bewildered and frustrated by the attacks made upon us.[2]

The author then complains that we have poured our money and effort into fruitless devices, such as "public relations," and notes that these are doomed to failure.

Another writer says:

> I get the impression that the career of medicine is not quite what it was—in dignity, in educational breadth, in personal service and in the satisfactions and rewards it brings the practitioner. Here and there one finds what might be called a "doctor of the old school" and one recognizes a type that is passing away. This, I suggest, is not cause for despair but it is reason to examine the problem and to see whether one can find the new forms that will restore to the practice of medicine the qualities it has traditionally possessed.[3]

Not every physician sighs for the return of the old family doctor, however. The President of the Arizona Medical Association outlined three things we ought to avoid. I shall abbreviate them:

> We must not with pious tongue in fat cheek cry nostalgically for the old days and pretend that we are still 19th century leeches and should be adulated as such. We cannot restore the day of the country practitioner, beloved counsellor to the whole rural family . . . An injection of 400,000 units of penicillin in the buttock not only stings, but understandably does not engender the same sense of gratitude.[4]

The second negative caution he gives cautions against faith in the mahatmas of Madison Avenue, and the third asks that we eliminate from our official program the strident demand for the economic rights of doctors. People have read too long of our defensive special pleadings and they have become derisively aware that the most widely read medical magazine in America is said to be *Medical Economics.* Harsh words, one observer says, but worthy of serious thought.

Reynolds[5] sees the ambivalence of admiration for personal physician and criticism of the profession as readily explainable. The continued favor of the individual physician, he thinks, is a matter of "self-transference"—"after the fashion of the famed Bishop of Gloucester who lauded orthodoxy as his *doxy* and dismissed heterodoxy as another man's *doxy.*" He finds shades of the tribal medicine man still falling across the physician-patient relationship. The purely scientific side of medicine, he says, scares the daylights out of people—it is the bolstering of the faltering spirits of the sick "which is cherished by the patient and holds his trust." He sees the difficulty with medicine as a whole in the present day as based upon hard-nosed economics.

The same subject matter is also regularly discussed in the public press but I shall not depress you by a discussion of that aspect of the problem for you and I encounter these stories constantly and we are surfeited with them.

II

It is obvious by now that, among the many images which the physician casts in public, the economic aspects of his services weigh heavily. It is just as obvious to you, too, that I am incapable of discussing intelligently this aspect of the problem with you, for the mere fact of counting my change sometimes poses a major financial involvement for me. I would like to talk to you, however, about the complaint that some people have, experiences with doctors that insure that they will never go back to them again; in other words, to discuss the danger of the individual doctor's fall from grace, not economically, but professionally and in his relations with people. This seems to lead us to a discussion of the art of medicine, as psychiatrists see it. Strangely, thus far psychiatry does not seem as much involved in the clouded image as one might expect it to be. In fact, its image seems to have improved in the past few years and the reasons for this probably lie in its attention to the physician-patient relationship which it recognizes as the basis for whatever therapeutic action it is able to accomplish.

counter to the trend

Over the years, the psychiatrist has moved out from behind hospital walls—into an office practice and now experiments are being conducted which will lead him to calls in the home. Thus, psychiatry keeps up its reputation for moving in directions opposite to the main body of medicine. There is no doubt at all that we as physicians, as we have become more scientific in medicine, have slighted or forgotten the feelings of people. The image of the capable, highly trained, scientific physician, who is brusque and even businesslike, is abroad in the land. But people do not like their doctors like this and they need more than high class scientific attention. Even though the thought seems regressive to the modern highly trained physician, the fact remains that, in addition to scientific skill and capability, people need some evidence of warmth and interest and, above all, a courteous, interested attention to their complaints and their problems. It is axiomatic that people do not get angry or litigious with doctors simply because of scientific inadequacy. Rather they get angry because of real or fancied slights, rejection or lack of consideration. These rejecting attitudes lie behind a number of the numerous law suits to which the doctor is exposed today. If the omens and portents of the times are to be read correctly, medicine in its present state of public relations will even be blamed for numerous economic problems which it has nothing to do with at all.

You are aware of the fact that the feeling of well-being or lack of it is based on the subtle interplay of spirit, mind, body and emotion. For this reason, the wise physician does not rely on science alone. He never regards the sick as so many cases to be classified and handled by the book. He sees each patient as a unique person with problems distinctively his own. It may even be that the patient has brought about or is largely contributing to his own illness; but, in any event, he is reacting to his condition in his own way. To do things needful or helpful for him calls for the skillful application of the science and art of medicine. In this the human qualities of the physician are of utmost importance.

the healing element

After decades of neglect, the psychology of medical practice is now beginning to receive the attention it deserves. The vast literature on placebos, on psychosomatic disorder, on functional illnesses, on the human equation in medicine offers validation of the fact that emotions, attitudes, and expectations of patients are of crucial importance in their response to treatment and, of necessity, these elements will be important in forming the image of the doctor. The physician is quite justified in using his symbolic healing role for their benefit.

I am getting a bit concerned now that I may be misunderstood in emphasizing the art of medicine. In earlier years the art of medicine was so devoid of scientific knowledge that pomp and ceremony were highly useful therapeutic adjuncts and every sincere practitioner since then has looked with disdain upon physicians who depended solely upon their popularity to gain favor. This is not at all the art of which I speak, nor do I for a moment countenance any slighting of scientific knowledge. It has been said that, in the hierarchy of medical values, science is the Prime Minister, while art is King. The proper practice of medicine and surgery is a most judicious mixture of both.

What do we mean when we espouse greater attention to the art of medicine as one of the cures for the present day ills of medicine? Well, Pitcairn says that with less medication, more attention might be given to the management of the patient himself thus anticipating the wise aphorism of Francis Peabody when he said: "To cure a patient is simply to care for him"—the most elegant of all ideals for the guidance of the healer.

This is what we mean by the art of medicine and this is what would cast the proper image of the present-day physician. To see patients not as problems to be solved, but sensitive people to be helped, this is the watchword. "An ideal physician is intelligent, compassionate, sympathetic, perceptive, and understanding and he likes human beings. He is a man of culture, but there are many such people. The unique quality of the physician is the fact that he is a scientist using equipment not available fifty years ago and possessing scientific understanding that no other type of healing has to offer."[8]

communication also is an art

One other cogent reason for our loss of status with the public has to do with imperfect communication with the layman and failure to impart the most attractive and useful aspects of our own self-image to the community. We have seemed to consider this effort beneath us. Our own image of ourselves is one of knowledge, leadership, dedication, and compassion. We have been so engrossed with this image that it has escaped our attention that this is not at all what the public sees, at least in most of its segments. The public image is made up of a number of parts, one based on emotional ties with the personal doctor; the other and over-weening image now has economic overtones.

Apropos of all of this, Leonard Larson had this to say to the House of Delegates in his farewell address as President of the American Medical Association:

> Medicine is an institution of service to mankind. Public attitude toward the medical profession reflects to a significant degree the manner in which the individual physician serves his patients. Much criticism of the profession is unjustified, some is not. Much of it is based on misinformation and misunderstanding. I am convinced that greater involvement by the physician in community affairs will help immeasurably to smooth out the two-way avenue of understanding between the physician and his patients.

This is the gist of my message to you and psychiatry can offer help in improving one part of medicine's image, resulting from the care of patients. The economic factors are beyond us or at least they rest in our helping and encouraging those insurance plans which will help our patients. For anyone to misuse these plans for personal gain, incidentally, is unforgivable and aids in the distortion of the public image of the physician as a person and as a member of an honored profession. Such distortion is reprehensible.

the contribution of psychiatry

What has psychiatry to teach which might help in our present situation? Mainly it has to teach the importance of the doctor himself as a person in every encounter he has with patient and public. It teaches that the doctor is an essential ingredient in every medical situation and his effect upon people is either psychotherapeutic or psychonoxious. Michael Balint expressed this well when he said:

> The most frequently used drug in general practice is the doctor himself and this is a drug without pharmacology, without directions as to dosage, form, frequency of administration, and without leads to the hazards, allergic responses or undesirable effects. We know that the doctor himself is an extremely powerful drug and that those who use it relieve more suffering than has yet been recorded by the most powerful drug in the pharmacopeia. The family doctor knew this to be so and he prescribed himself in generous doses.[7]

This would certainly approximate what Dana Atchley would call "that fusion of the healer and the scientist which constitutes the true art of medicine." Like all great art, the art of medicine is the skillful and creative application of a scientific discipline to a human problem. As Ruskin wrote "Fine art is that in which the hand, the head and the heart of man go together."

Cadmus, a physician hospital administrator in writing for resident physicians recalled to us an extract from Tolstoi's essay, The Fundamental Law of Human Life, which might stand us in good stead:

> One may deal with things without love, one may cut down trees, make bricks, hammer iron without love but you cannot deal with men without it just as one cannot deal with bees without being careful. If you deal carelessly with bees either you will injure them or will yourself be injured.[8]

I guess the same things may be said about dealings with our families, our friends, our colleagues and our patients. While in our human frailty we are prone to forget this at times, we would do well to regularly recall these concepts to our minds. If we were to do so we would solve many of our problems and improve our image and our public relations. Also we could meet in fact the highest ideal of the doctor—that of a teacher and a healer in addition to being a scientist and a friend.

200 Retreat Ave. (2)

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Pulmonary Physiology in Clinical Practice

I. General Concepts

WILLIAM R. PACE, Jr., M.D. / C. J. MARTIN, M.D. Seattle, Washington

The popular myth depicting the pulmonary physiologist as an eccentric, steeped in higher mathematics and electronic gadgetry, and totally divorced from the practical problems of clinical medicine has frightened many practitioners away from functional testing (Fig. 1). The truth is, many of us who work with pulmonary physiology are clinicians, primarily concerned with finding out what makes sick people sick and what can be done to help them. We do technically complicated diagnostic procedures such as bronchospirometry and membrane permeability evaluation (carbon monoxide diffusion studies) on about the same percentage of our patients as the cardiologist does left heart catheterization or coronary angiography among his. On the other hand, any physician can measure flow rates and vital capacities just as he takes blood pressures, using instruments of cost and complexity comparable to the sphygmomanometer. And the information obtained is as frequently of value in making a diagnosis and planning treatment.

These articles are being written to help the reader to a better understanding of this subject, both in theory and in practical application to his own patients.

When man's early ancestors crawled up out of the sea,[1] a new apparatus became necessary for the exchange of oxygen and carbon dioxide between the tissues of their bodies and the gaseous medium now surrounding them. Through eons of evolutionary change, the mammalian respiratory system has developed into a mechanism which performs this function with hardly believable efficiency. The basic functional units[2] of this system are the millions of alveoli bound together in the lung parenchyma, each in juxtaposition with capillaries of the pulmonary vascular system (Fig. 2).

The alveolar-capillary membrane is the barrier between gas (air) and liquid (blood), across which actual exchange of O_2 and CO_2 takes place by the process of *diffusion.* In order for these gases to diffuse adequately and each in the proper direction to best serve the body's economy, the alveolar-capillary membrane must be *permeable,* the capillaries surrounding each alveolus must be *perfused* with venous blood from the right heart, and there must be a relatively constant mixture of gases maintained in each alveolar space by the process of *ventilation.*

It follows then that if *ventilation* of an alveolus is occurring and *perfusion*[3,4] of its capillaries is simultaneously occurring, *diffusion* across that particular (normally permeable) alveolar-capil-

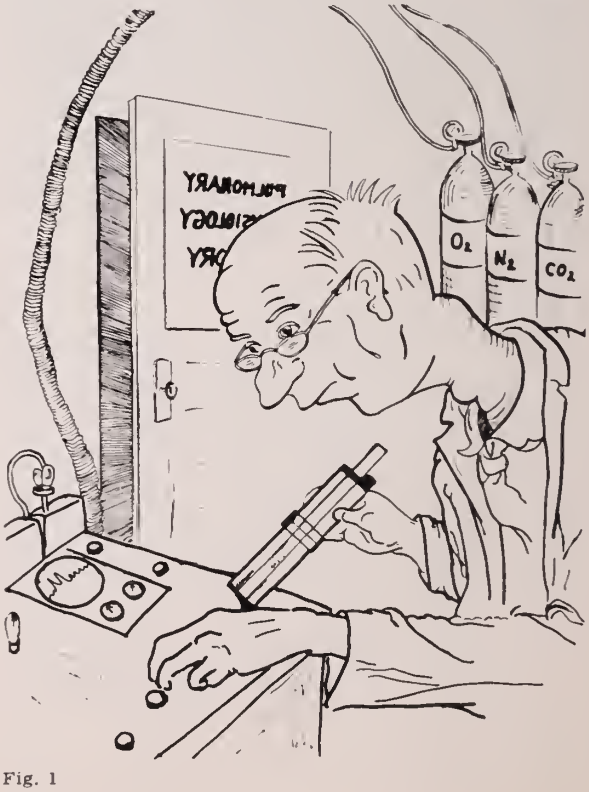


Fig. 1

From the Cardio-Pulmonary Laboratory, Providence Hospital Heart Center, and The Institute of Respiratory Physiology, Firland Sanatorium, Seattle.

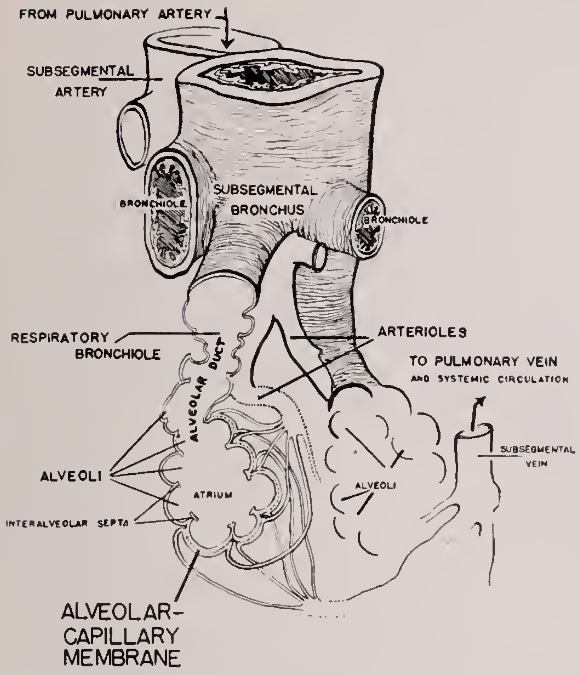


Fig. 2. The primary respiratory unit.

lary membrane will take place. The direction and quantity of movement of a particular gas, however, depends on the relative tension, or partial pressure, of that gas on each side of the membrane, and its solubility.

crossing the membrane

As in other comparable systems, when pressures (or concentrations) differ on two sides of a barrier (permeable membrane in this case) the effective direction of movement is from the high pressure (more concentrated) side toward the low pressure (more dilute) side until equilibrium is reached. Since the partial pressure of O_2 is normally higher in the alveolus than in the venous blood coming to the capillary, O_2 moves from alveolus to capillary. The reverse is true of CO_2.

In the case of CO_2 (which is an extremely soluble gas) the factor of its solubility does not limit the rate of its movement between gas and liquid phases in crossing the membrane. Therefore virtual equilibrium of CO_2 partial pressure is attained between alveolar gas and the arterial blood leaving the pulmonary capillaries.

Oxygen, however, being only 1/25 as soluble as CO_2, is limited by this lesser solubility in moving from alveolar gas across the membrane into the blood to such an extent that actual equilibrium of partial pressures is not completely attainable during the time the blood is passing through the capillaries. Thus the partial pressure of O_2 in the arterial blood leaving the pulmonary capillaries is still slightly less than that of alveolar gas. This remaining difference in partial pressures of O_2 between alveolar gas and arterial blood is sometimes referred to as the alveolar-arterial gradient for O_2.

the carrier

At this point we should remember the role played by the erythrocyte as a carrier of oxygen. When we consider its relatively low solubility in water, it becomes obvious to us that the total amount of O_2 which could be carried in solution in the plasma of an adult human (at normal atmospheric pressure) would be hardly more than enough to supply the metabolic needs of a few houseflies.

Fortunately, however, as O_2 molecules cross the alveolar-capillary membrane and enter the plasma, they are removed from it by combining with hemoglobin to an extent which depends on the partial pressure of O_2 (Fig. 3), and of course on the amount of hemoglobin present. This reaction (the combination of O_2 with Hb) is reversible (dissociation of bound O_2 from HbO_2) and proceeds in whichever direction required (oxidation or reduction) to attain an equilibrium which occurs at that particular percentage of saturation which is possible for hemoglobin at

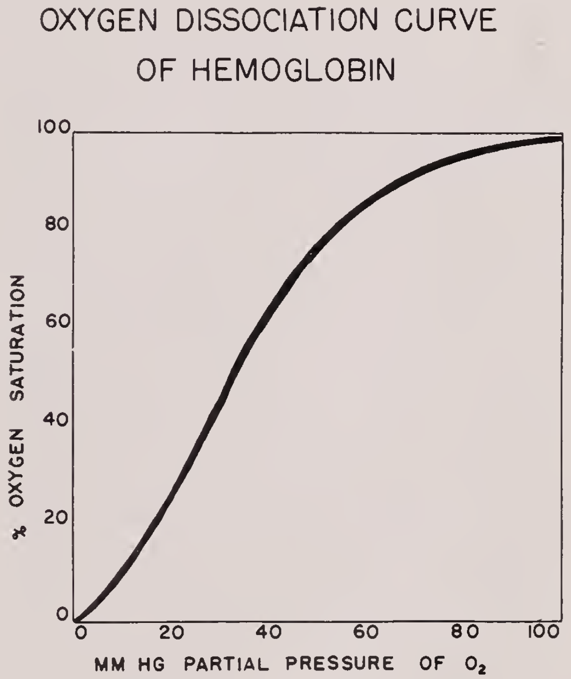


Fig. 3 Curve shifts to the left with increased pH and lowered CO_2 tension — opposite change of pH or CO_2 causes curve to shift to the right.

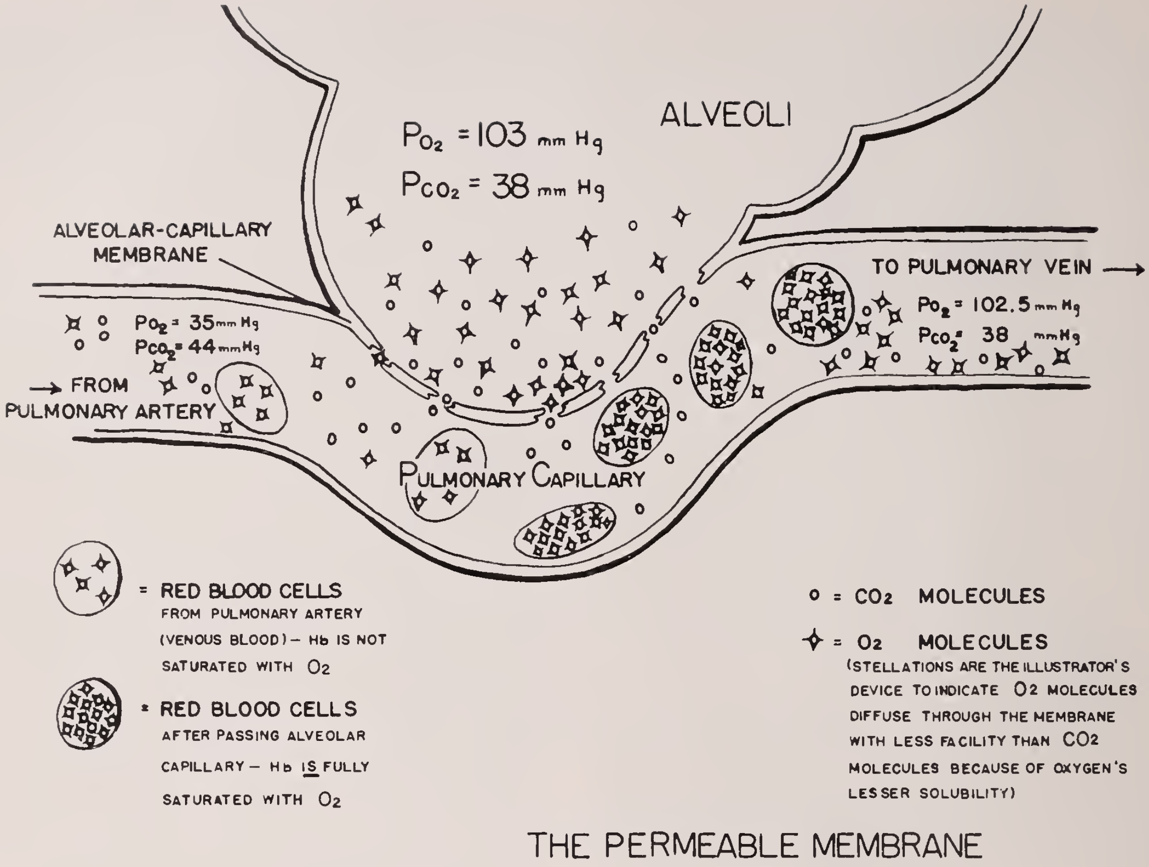

ALVEOLI
Po2 = 103 mm Hg
Pco2 = 38 mm Hg
ALVEOLAR-CAPILLARY MEMBRANE
Po2 = 35 mm Hg
Pco2 = 44 mm Hg
→ FROM PULMONARY ARTERY
PULMONARY CAPILLARY
TO PULMONARY VEIN →
Po2 = 102.5 mm Hg
Pco2 = 38 mm Hg
= RED BLOOD CELLS FROM PULMONARY ARTERY (VENOUS BLOOD) – Hb IS NOT SATURATED WITH O2
= RED BLOOD CELLS AFTER PASSING ALVEOLAR CAPILLARY – Hb IS FULLY SATURATED WITH O2
o = CO2 MOLECULES
= O2 MOLECULES (STELLATIONS ARE THE ILLUSTRATOR'S DEVICE TO INDICATE O2 MOLECULES DIFFUSE THROUGH THE MEMBRANE WITH LESS FACILITY THAN CO2 MOLECULES BECAUSE OF OXYGEN'S LESSER SOLUBILITY)
THE PERMEABLE MEMBRANE

Fig. 4

the particular partial pressure of O_2 in the surrounding liquid (plasma).

At higher O_2 tensions (as in the alvelar capillaries) a higher *per cent saturation* of the hemoglobin occurs, and the O_2 *content* of the blood is high. Further along the circulatory route, in the tissues where oxygen utilization lowers the O_2 tension of the plasma, dissociation occurs, releasing O_2 for use of the tissues and resulting in lower O_2 *content* (and per cent O_2 saturation) of the venous blood returning to the heart. Remembering these facts may help the reader to clear up some of the confusion often associated with consideration of the relationships between oxygen *tension* or *partial pressure* of blood (expressed as Po_2) and oxygen *content* and *per cent saturation.*

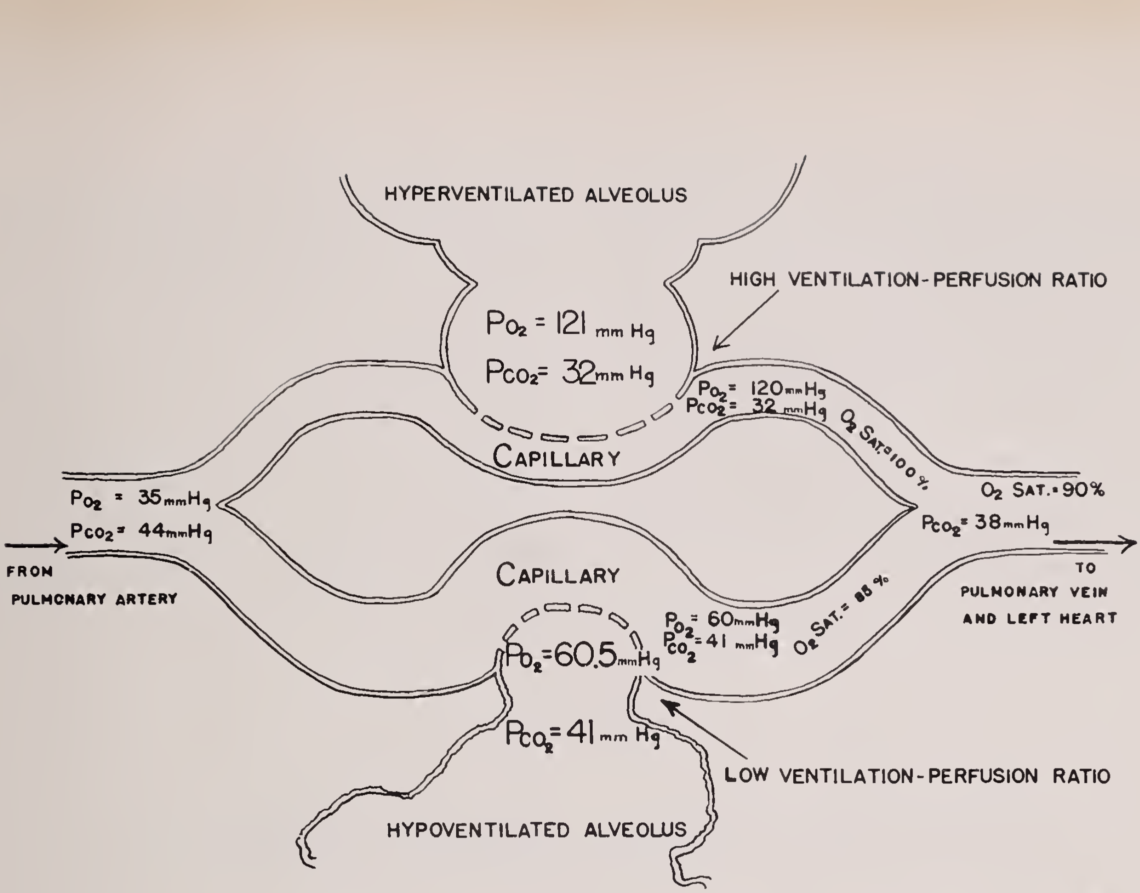
permeability

Permeability[5] of the alveolar-capillary membrane is like a selective tariff. This "tax," or reduction in partial pressure from one side of the membrane to the other is exacted only on O_2, and is appreciable only in disease states. Carbon dioxide, being 25 times as soluble as oxygen, is "duty free." While there is little pressure difference for O_2 across the membrane in normal man, it may increase significantly in those diseases affecting the alveolar-capillary membrane (such as sarcoidosis, beryllium granulomatosis, the pneumoconioses, bronchiolo-alveolar cell carcinoma, and Haman-Rich Syndrome). This is why abnormal permeability results in arterial hypoxia without CO_2 retention (Fig. 4).

ventilation-perfusion

The ratio of the amount of *ventilation* of a particular alveolus to the amount of *blood flowing* through the capillaries surrounding it per unit time controls the concentration of O_2 and CO_2 in the alveolar gas and in the blood leaving those particular capillaries and returning to the left heart. For example, venous blood flowing through capillaries surrounding poorly ventilated alveoli would return to the pulmonary veins poorly oxygenated and with a relatively high CO_2 content. Alveolar gas from such units will also have a low O_2 and high CO_2 content.

This condition is referred to as a low *ventilation-perfusion* ratio, which leads to hypoxia when



VENTILATION PERFUSION RELATIONSHIPS

Fig. 5

enough units are involved. On the other hand, units having a high ventilation-perfusion ratio will have decreased blood flow relative to the amount of ventilation, and have high O_2 and low CO_2 concentrations in alveolar gas and blood.

The extremes of these conditions would be a respiratory unit well ventilated but without bloodflow (as in pulmonary embolus), as contrasted with a unit with bloodflow but having no active ventilation (atelectasis) (Fig. 5).

If the distribution of ventilation to all alveolar units of the lung were completely uniform and each capillary perfused with exactly the same amount of bloodflow, the ventilation-perfusion ratios of all alveolar units would be the same, and the concentration of O_2 and CO_2 would be identical in each alveolus and in the blood returning from each alveolar-capillary unit. But such is not the case. Even in normal individuals[6] there is non-uniform distribution of ventilation and of bloodflow resulting in a mixture of alveolar units with high and low ventilation-perfusion ratios. When the number of units with low ventilation-perfusion ratios is increased to the extent that hypoxia (and, in more severe states, also retention of CO_2) develops, ventilation-perfusion abnormalities are said to exist. *This is the most common mechanism of production of hypoxia and hypercarbia by disease states, in clinical medicine.*

alveolar ventilation

So far our discussion has been concerned only with the derangement in gas exchange across the individual respiratory unit. Overall hypofunction will also result in pulmonary insufficiency in lungs with normal permeability and uniform ventilation-perfusion ratios in the individual units. Insufficiency develops because the sum of the ventilating functions is not sufficient to meet metabolic demands. *Alveolar ventilation* must bring sufficient O_2 in and CO_2 out. Any clinical state causing hypoventilation results in hypoxia and, if severe enough, hypercarbia.

the four categories

Thus far we have developed the general concepts needed for an understanding of three of the four basic levels at which we may seek and find pathologic alterations which may interfere with the process of getting oxygen from the atmosphere into the blood, and CO_2 from the blood to the atmosphere. The fourth is that of anatomic shunting between pulmonary arterial and venous systems. All abnormalities of pulmonary function are to be found in one or more of these categories, namely: (1) hypoventilation; (2) ventilation-perfusion abnormalities; (3) membrane permeability defects, and (4) true arterio-venous shunting.

It is hoped that with these concepts in mind the reader will be prepared to follow the next articles of this series, which will deal with these four levels individually, as to types of abnormalities to be found, methods of measurement, and application to clinical practice. ■

951 Medical-Dental Building (1) (Dr. Pace)

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Early Medicine in the Pacific Northwest

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Medicine in the Pacific Northwest probably began with the primitive medicine man or shaman. His practice of cupping, bleeding, and administering of herbs not only preceded, but also often found its counterpart in methods used by the pioneer physicians.

The earliest of these physicians to come to the Oregon Country served as ship surgeons on the fur trading vessels. Among these was Dr. John Mackay, who, in 1786, served on the ship *Experiment.* After a long and difficult voyage across the Pacific, so many of the crew had developed scurvy that Captain James Strange, in charge of the expedition, decided to land near Nootka Sound on the west coast of Vancouver Island. Here he bartered with the Indians for a house where the invalids could recover. After obtaining berries and vegetables "the scorbuticks soon felt relieved from those alarming symptoms of their disease which a few days before their landing threatened them with destruction."[1]

Before leaving the Island with his recovered crew, Captain Strange had obtained six hundred sea-otter skins and could foresee greater opportunity for future profits if a representative such as Dr. Mackay could make friends with the Indians and thus stimulate trade preparatory to a return of his ship the following year. His decision in leaving Dr. Mackay at this location is described by him in his Journal, which reads as follows: "In Order to secure to us the affection of the Natives, and with a View to the Personal safety and Comfort of the individual, who was to remain with them it was necessary to Select some one, whose Professional Talents might make him useful and endear him to those whose power and Caprice his Life became exposed the moment Our backs were turned. To this end therefore, I was glad to avail myself, of the Offer of Service made me by a young man, named Mackay, who acted as Surgeon on Board the Experiment."

Dr. Mackay soon gained the affection of the chief and his family by his tender care in dressing the scabby hands and legs of the chief's child. When Captain Strange and his ship sailed from Nootka Sound Friday, July 28, 1786, the young surgeon was left as a lone physician, trader and colonist in the midst of a tribe of unfriendly Indians. He may well be considered the first resident practicing physician on the Northwest coast.

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After living here for fourteen years, Mackay sighted a ship, the *Imperial Eagle* commanded by Captain Barkley, to which in the dusk of evening he paddled and asked to be taken on board, with the object of escaping from his exile. He was clothed in a greasy sea-otter skin and looked so much like an Indian that the Captain's eighteen year old bride would have nothing to do with him.[1] However, his knowledge of the natives and their language made him useful to Captain Barkley and he accepted his services.

Another of these early ship surgeons was Dr. Archibald Menzies who was not only a physician but also a naturalist.[2] He took his training in botany while studying medicine at Edinburgh University. Having attained some home fame as a botanist, the British Government appointed him in 1790 as naturalist to accompany Captain George Vancouver on his voyage around the world. When Dr. Cranston, the surgeon aboard the ship became ill, Captain Vancouver appointed Dr. Menzies to take his place. Later, he commended Menzies for his medical skill, writing in the preface of his journal that "not one man died from ill health." Menzies botanized extensively in the Pacific Northwest, and his name is associated with many plants native to that area. He received his medical degree from the University of Aberdeen in July 1799 and followed the profession of doctor and surgeon in London after retiring from the Navy.

The first overland expedition to the Pacific Northwest to record items of medical interest was that of Lewis and Clark, who had been sent by President Thomas Jefferson to explore the Northwest.[3]

The list of medical supplies obtained for this expedition included such drugs as cream of tartar, powders of jalap, rhubarb and ipecac, gum camphor, gum asafoetida, calomel, and several ointments. For surgery, these men took a set of pocket instruments, a set of tooth instruments, three lancets for bleeding, and a tourniquet. The group spent the first winter with the Mandan Indians. During their stay here, venereal disease became a serious problem. For treatment, they used mercury, even at times to the point of salivation. While in this winter encampment, Clark bled one of his men who was suffering from pleurisy and applied those remedies common to that disorder. Here, also, Sacajawea's first child was born. Because, as Clark described, her labor was tedious, he was advised to administer two rings from the rattles of a rattlesnake which were to be broken in small pieces and added to a small quantity of water. He states that about ten minutes after taking this, the baby was born. Later, on their journey up the Missouri River, he and also Lewis bled her when she became seriously ill. She had complained chiefly of distress in the lower abdomen, which Clark ascribed to "an obstruction of the mensis in consequence of taking could". He continued treatment with barks and laudanum. Intestinal complaints became common in their party when their food consisted largely of dried roots and salmon. For this, Clark would administer salts and tartar emetic as well as Rush's Pills. He records in his diary of January 27, 1806 the following, "Goodrich has recovered from the Louis Veneri which he contracted from an amorous contact with a Chinook damsel. I cured him as I did Gibson last winter by the use of mercury."[4]

Smallpox was also found among the Indians, and Lewis believed that this epidemic had caused the desertion of many of the coastal villages. During the stay of the party at Fort Clatsop, the Indians brought their sick to be treated by Lewis and Clark. Lewis commented on the practice of segregation of menstruating women from the remainder of the family. A small lodge, separate and apart from the camp, served as a retreat for them during this period.

The Astor expedition in 1811 neglected to bring a physician with them and the historian, a clerk, Alexander Ross, bemoaned this fact with some bitterness.[5] He relates that, "Thirty seven of their men became serious ill with gripings and laid up after having breakfasted on fresh beaver taken out of the river. Those who had eaten other fare remained in good health. The sufferers were almost speechless and motionless, having scarcely the power to stir, yet suffering great pain, which caused froth about the mouth. I was seriously alarmed." He had the sick drink gunpowder in warm water, using a handful to a dish. This was without benefit. He then used fat broth with a handful or two of pepper. He made them drink this freely. Most of the men obtained relief after one or two day's treatment. Whether it was the broth or the pepper that had curative properties, Ross says he did not know.

The first ship surgeon for the Hudson's Bay Company to leave us a medical record of native diseases and conditions was John Scouler who served on the *William and Ann* in 1825.[6] He recorded seeing a case of intestinal obstruction as well as numerous cases of apoplexy, smallpox, enteritis, measles, gonorrhea, and syphillis among the Indians. He also described the process of head flattening common among the Chinooks. Scouler, in addition to his medical records, left descriptions of many plants and animals which were new to science. Today, his name is attached to many of these species.

In 1825, Dr. John McLoughlin, chief factor for the Hudson's Bay Company, and Governor George Simpson moved from Fort George to their new headquarters, Fort Vancouver, located approximately one hundred miles up the Columbia River. This location soon became the hub of the Oregon Country which extended from the forty-ninth parallel to Mexican California and from the Pacific Ocean to the Rocky Mountains.

Dr. McLoughlin's medical training began at the age of fourteen when he was apprenticed to Dr. James Fisher of Quebec with whom for four years he studied medicine, surgery and pharmacy.[7] However, he was able to minister in but a limited way to the medical needs of the employees, visitors, and Indians at the Fort, for from the beginning, his medical responsibilities were greatly overshadowed by his many administrative duties. In 1829, when an epidemic, probably malaria, took so many lives, he used untrained men to help him dispense quinine to the sick and dying. When the bark became scarce, they used the root bark of the dogwood trees with benefit. Because of this epidemic, Dr. McLoughlin petitioned the Governor of the Hudson's Bay Company in London to send him a physician. In reply, Dr. Richard J. Hamlyn, was sent, in 1828, to assist Dr. McLoughlin at the Fort. Trading tobacco and other goods to the Indians in exchange for furs, we are led to believe, was not his idea of practicing medicine and after quarreling with Dr. McLoughlin, he left in 1830.[8]

Dr. John Frederick Kennedy, a graduate in medicine from the University of Edinburgh, received a three year contract from the Hudson's Bay Company to serve the Columbia district for which he was to receive sixty pounds sterling per year. Shortly after his arrival in 1830, another severe epidemic broke out (thought to have been either malaria or influenza) from which the natives died by the thousands. He left the Fort after serving but one year of his contract.

A letter written to P. C. Pambrum, clerk at Fort Walla Walla, by Dr. McLoughlin, September 1832, reads: "I am sorry to inform you that the intermittent fever is raging with great violence at this place, but thanks be to God for his mercies, none of our people as yet have died."[9]

As an example of the medical supplies used, we find, in a letter written by Dr. McLoughlin, November 18, 1830, to Captain Ryan, a request for the following drugs: "1/2 lb. gum camphor, 1/2 lb. sulphate quinine, 12 lbs. best peruvian bark, 1 lb. crude opium, 1 lb. acetate lead, 20 lbs. epsom salts and 4 lbs. rhubarb powder."

Dr. McLoughlin again requested medical aid, and this time two young physicians, Dr. Meredith Gairdner and Dr. William Tolmie were sent out. These men had not only been trained in the use of herbs for medicinal purposes, but also had had limited training in surgery. Dr. Tolmie in his Journal describes in detail the medical headquarters at the Fort. "Saturday, May 4th, 1833. After breakfast engaged in putting Apothecary's Hall in some degree of order, visited and prescribed for my patients and thus occupied till 12 when dinner was announced." He further states, "There is an excellent supply of surgical instruments for amputation, two trephining, two eye instruments, a lithotomy, a cupping case, besides two midwifery forceps and a multitude of catheters, sounds, bandages, probangs, two forceps, etc. not put in order."[10]

As a botanist, he collected and described many native species of plants of the Northwest. He also studied Indian ethnology, and with Dr. George M. Dawson of Montreal, published a dictionary of the languages of the aborigines of British Columbia. His library, consisting of nineteen books, is preserved in the McLoughlin House Museum at Oregon City, Oregon. Because he was interested in mountain climbing as an avocation, he was one of the first men to attempt an ascent of Mt. Rainier.

In 1833, Dr. Gairdner erected a building which became the "first attempt at permanent hospitalization in the Pacific Northwest".[11] Dr. Tolmie in his diary writes that at one time they had two to three hundred patients. The size of the building was recorded in Hudson's Bay inventory of 1846-1847 as 32 x 22 feet and located near the Columbia River not far from the village.[12] Dr. Gairdner, although busy with the sick, found time to send plants and bird specimens to both the British Museum and Kew Gardens. He described the steelhead, the Gairdner woodpecker, the flower known as penstemon and others, all of which are named after him. Because of ill health due to tuberculosis, Dr. Gairdner left the Fort for the Sandwich Islands in 1835. In an effort to forestall his pulmonary hemorrhage, he records having bled himself from both arms.

To replace Dr. Gairdner, Dr. McLoughlin then secured the services of an American ornithologist, John Kirk Townsend, to serve as physician in the Fort. He had come west with Thomas Nuttall, under commission of the American Philosophical Society to search for birds. They left Independence, Missouri, on April 28, 1834 in the company of Nathaniel Wyeth. In Townsend's diary, upon assuming duties at Fort Vancouver, he wrote, "There are at present but few cases of sickness, mostly ague and fever, so prevalent at this season."[13] After a year's service, he left the Fort to return to the states.

He also records in his diary the stoicism of the Indian wives of the fur traders traveling with the brigade. One gave birth to a baby in a tent near his, and he was not even aware of her being in labor until the infant cried. "In about half an hour after this event, we got under way, and the woman walked to the boat carrying her newborn infant on her back, embarked, laughed and talked as usual, and appeared in every respect as well as if nothing had happened."

Dr. William Tolmie returned to the Fort in 1836 from Fort Nisqually, where he had been serving as chief trader for the Hudson's Bay Company, and took charge of the hospital until 1840, at which times Dr. Forbes Barclay arrived at Fort Vancouver from England. He was the best trained physician thus far to be sent out. He described the "intermittent fever" of 1840, which in all probability was malaria, as endemic in the region. He also records measles appearing at the Fort in November 1847 in an epidemic form. In addition to caring for the sick, he was called upon to attend the settlers and sometimes prescribed for them without being able to see them as indicated by a letter that he wrote to Mr. Foster, the father of a sick child. In it were instructions for the dosage of the powders prescribed. He felt that perhaps the "indisposition" of the mother had some bearing upon the illness of the child and if no improvement was noted, he wished to see the mother.[14] In 1850, he moved to Oregon City and continued his practice of medicine there until his death in 1873.

Dr. McLoughlin retired from the Hudson's Bay Company in 1846. During his twenty one years of service at the Fort, he not only won the respect of the Indians, but also greatly endeared himself to many of the early American settlers by providing them with both food for themselves and seed for their crops. Edwin Markham refers to him as "one of the towering personalities of the Far West. He was a lover of man, a lover of justice, a lover of the common people."[15]

The missionary period began during the decline of the great fur trading era and brought to the Pacific Northwest two important physicians, Dr. Marcus Whitman and Dr. Elijah White. Dr. and Mrs. Whitman, accompanied by Reverend and Mrs. Spalding, reached Fort Walla Walla on September 1, 1836. These two white women were the first to have crossed the continent. After a brief stop at the Fort, the party continued on by canoe to Fort Vancouver for the purpose of securing supplies. The men then returned to establish the Whitman Mission at Waiilatpu near Fort Walla Walla and the Spalding Mission at Lapwai, near Lewiston, Idaho. Their wives remained at the Fort as guests of Dr. McLoughlin until November 3, 1836. Dr. Marcus Whitman was, according to historians, a great but humble physician. He was not only the first graduate of an American medical college to cross the Rocky Mountains, but he also performed the first surgical operation west of the Rockies. Whitman attended the white women in childbirth, several times riding more than a hundred miles on such an errand and staying with the patient until she recovered. He faced hunger, hardship, storm and flood to carry healing and relief to his patients. The affectionate name given him was "the Good Doctor". The epidemic of measles which killed so many Indians indirectly was the cause of the Whitman Massacre which ended this Protestant missionary enterprise, but the mission had assisted in opening the way for the great migration of settlers to the Oregon Country. It also served as a stopping place for emigrants on their way to the Willamette Valley.

Dr. White, who arrived in Oregon in May 1837, served at the Methodist Mission in Salem, Oregon. The group with which Dr. White had come, had sailed from Boston July 22, 1836, arriving at Fort Vancouver in May 1837. From Fort Vancouver, he traveled by canoe to Mission Bottom north of Salem, Oregon, where Jason Lee had established his mission in 1834. During his three year service at the Mission, he built a large hospital near his home. He was called the first American teacher of medicine west of the Rocky Mountains because of the fact he took a young man, W. H. Willson, an assistant missionary, and taught him the rudiments of the medical art. Later in his life, this man received the title of doctor instead of reverend.[16] Following this service, Dr. White was twice employed (1842 and 1851) as a special Indian Agent in Oregon. Later he moved to San Francisco where he resumed the practice of medicine until his death in 1879.

The next phase of medicine in the area was military, and for this period we have but meager information. We do know a military reserve ten miles square had been set aside adjacent to Fort Vancouver and that in May 1849, Major Hathaway brought out the first contingent of troops from New York on the U. S. steam transport *Massachusetts* having made the long trip around the Horn. Assistant Surgeon, L. H. Holden, accompanied the contingent. His first patient in camp was a soldier who had been flogged until he fainted. His offense was the theft of six hundred dollars on board the ship. On his first visit to the hospital August 6, Dr. Holden found two cases of fever and ague.[11]

By 1856, the community surrounding the army post had grown to an estimated four to five hundred white and an uncounted number of Indians. The need for some type of hospitalization was imminent. The people looked to the Sisters of Charity of Providence who had arrived December 8, 1856 at St. James Mission, located near the Old Fort Site, to meet this need.[17] These five devoted women, led by Mother Joseph of the Sacred Heart, had traveled by steamer to the Isthmus of Panama, crossed it by foot and embarked on the steamer *Golden Gate* for San Francisco and then on to the mission site. Sister Joseph, on April 5, 1858, offered to the community a part of the building, which she had planned to use as a laundry and bakery, for hospital facilities. This part measured 16 x 20 feet and became known as the first permanent hospital in Washington Territory. The original ledgers which are still in the hospital show the daily charge of one dollar included both medicine and spiritous liquors when the latter were ordered by the physician. These records are also revealing as to the length of hospital stay. One patient, Catherine Cosgrove, remained 169 days and another patient 197 days. An interesting charge appeared in the ledger of May 12, 1883 for services rendered in addition to room and board; liquor $15.00, washing $35.25, coffin $25.00, funeral service $15.00, hearse $4.00, grave $6.00 and shroud $2.00.

There were several physicians, who after serving their term at the army post, did not re-enlist, but instead started practicing medicine in this small community. An outstanding example was Dr. David Wall, who, during the time of his military service, had served as an army steward. Upon his discharge in 1865, he built a drugstore which also served as his office. He ran an advertisement in the Vancouver Register of May 2, 1869 listing the following items for sale: "drugs, medicines, acids, patent medicine, paints, oils, varnishes, brushes, perfumeries and fancy goods." Dr. Wall practiced medicine for forty years despite the fact he had no formal training. Nevertheless, he filled a need in his community. He died in San Francisco at the age of 78.

This pioneer physician of a hundred years ago, like his contemporaries, advertised in the newspapers and made all his calls either on horseback with saddle bags attached, or by team and rig hired from the livery stable. He always carried his small black bag filled with medicine in the form of powders, liquids and handrolled pills. Such remedies as Dover's powder, quinine, castor oil and blue mass were prescribed. Various liniments and "sticking plasters" were also used.

These pioneer physicians were rugged individualists, and their ability to endure many hardships of their day was truly remarkable. Their devotion to the needs of the community endeared them to society and earned for the profession the many tributes that have been paid to the family physician. The wife of the pioneer doctor must not be ignored since her home was often the office, the hospital, and the restaurant for the sick. Patients who needed constant attention were often moved to the doctor's home, where his wife could administer their care. The fee for his services, aside from money, often consisted of hay for his horse, grain, chickens, beef, vegetables or wood. The newspapers of Clark County record occupations such as farming, animal husbandry, fruit and hop growing, printing, or operating an apothecary shop were necessary for him to follow in order to supplement his meager income.

The nostalgia of the days of the horse and buggy doctor and the home remedies remain in the minds of many people still living. Even though we are living in the atomic age, and medicine and surgery are keeping pace, many of our older patients enjoy thinking of the turpentine and goosegrease that mother applied to the chest for a cold. People drank sassafras tea as a spring tonic because they believed it thinned the blood and cured chills and fever. Sulphur and molasses were also used in some families as blood conditioners and purifiers, and even though none of these had any medicinal value, the faith these people placed in them served as a tonic or energizer for the spring work ahead.

May I conclude with the thought that in each era considered in this paper, the ship surgeon, the medicine of Lewis and Clark, the Hudson's Bay Company physicians, the missionary doctors, the military surgeons, and finally the family physician, all played a part in the "Winning of the West" for the United States. ■

111 West 39th Street

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Rapid Micro Bilirubin Test

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Because of increased interest in hyperbilirubinemia of premature infants,[1] we have developed the following simple blood collecting method and ultra-micro technique for measuring bilirubin in 0.08 ml. of serum.

material and method

Blood Collection: A heel puncture is made to produce a free flow of blood. Approximately 0.2 ml. of blood is collected using equipment illustrated in figure 1. Gentle suction on the aspirator tube, with caution not to cause hemolysis by forming bubbles, insures easy filling of tube A via the capillary tube without concern for capillary action, gravity, and blood loss common to other micro collection techniques.[2-5]

Reagents and Equipment:[6]

Bilirubin, reagent grade, (Physicians Drug Supply Company, Philadelphia, Pennsylvania)
Chloroform USP
Methyl Alcohol, A. C. S. Reagent, Assay 99.5%
Hydrochloric Acid Solution, 1.5% by volume
Sulfanilic Acid Solution 1.8% in 1.5% Hydrochloric Acid
Sodium Nitrite Solution 0.5% (Prepared just prior to use)
Diazo Reagent, 0.3 ml. of the 0.5% Sodium Nitrite Solution is added to 10.0 ml. of Sulfanilic Acid just prior to use.
Spectrophotometer
Pipettes, Sahli Hemoglobin, (calibrated to deliver 0.02 ml.)

The authors collaborated in development of this method while serving together at an army hospital, 1958-60. Dr. Shurtleff is Director of Pediatric Outpatient Clinics, University of Washington School of Medicine.

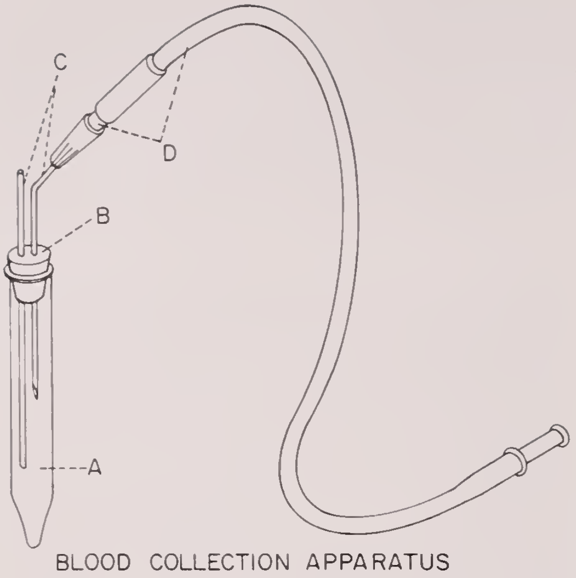

Fig. 1. Blood collection apparatus. (A) Medicine dropper with tip heat sealed forming a small centrifuge tube. (B-C) A rubber stopper from a Wintrobe hematocrit tube is fitted with a heparinized (dried) 75 mm. (diameter 1.2-1.4 mm.) capillary tube and a bent 20 ga. needle. (D) An aspirator tube (usually used with counting pipettes) is connected to the needle via a plastic needle adapter from a blood transfusion recipient set.

Procedure:

(Total Bilirubin) In a 10 x 75 cuvette "U" (unknown) is placed 0.5 ml. of diazo reagent. In a second cuvette 'B" (serum blank) is placed 0.5 ml. of 1.5% hydrochloric acid solution. To both cuvettes 0.02 ml. of serum or plasma and 1.0 ml. of methyl alcohol are added. Contents of the cuvettes are mixed by inversion. At the end of five minutes the per cent transmission of the diazo-bilirubin solution in cuvette "U" is read at a wavelength of 550 mu. using the blank in cuvette "B" to adjust the spectrophotometer to 100 per cent transmission.

(One Minute or "Direct" Bilirubin) Distilled water replaces methyl alcohol in the procedure outlined above. The necessity for exact timing requires that the diazo reagent be added last.

standardization

Three accurate weighings of 250 mg. of bilirubin are each dissolved in 500 ml. chloroform. Each of the stock standard solutions is diluted with methyl alcohol to progressively weaker solutions of desired concentration.* Triplicate ultra-micro bilirubin determinations are performed on each standard solution for a total of sixty-three readings (Fig. 2). The standard deviation of the mean is ± 1.23 mg./100 ml. and the average deviation of the mean is ± 0.02 mg./100 ml.

calculation

From the mean curve our calculation for the determination of an unknown "direct" or total bilirubin is:

$$X = \frac{2 - \log T}{1.06} \times 100$$

X = mg. of bilirubin/100 ml. of serum or plasma
T = the per cent transmission

comparative analysis

Simultaneous ultra-micro and standard macro (Malloy and Evelyn technique[8] with Ducci and Watson modification[9] for one minute of "direct" bilirubin) bilirubin determinations were performed by different technicians on 161 serum samples of blood removed by exchange transfusion from nineteen hyperbilirubinemic neonates. Separate standard transmission curves were used for macro and micro determinations. The average deviation of the difference was ± 0.49 mg./100 ml. and the standard deviation of the difference was ± 0.58 mg./100 ml. (Fig. 3).

discussion

As postulated by Hsia, Hsia and Gellis,[3] we have found it possible to use a smaller amount of serum in an ultra-micro bilirubin determination. Determinations of direct and total bilirubin on somewhat larger specimens of blood are necessary at infrequent critical intervals while following a rising bilirubin curve in order to properly evaluate the level of the significant fraction, indirect bilirubin.[10-12] Data from seven patients in elevated "direct" bilirubin levels indicate that our method is sufficiently accurate for clinical use.

Malloy and Evelyn have demonstrated that the time required to reach maximum color intensity of azobilirubin varies with the concentration of alcohol.[8] Our final alcohol concentration of 66.0 per cent, plus an excess of diazo reagent, produces maximum color intensity in five minutes. No protein turbidity was encountered in this five-minute period. A catalyst was not necessary

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* Standard solutions of bilirubin may be prepared more easily with purified human albumin solutions.[7]

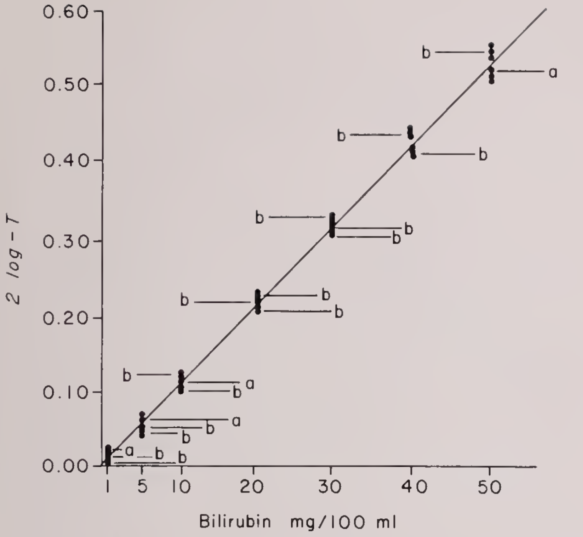

Fig. 2. Transmission readings of known bilirubin concentrations. The black line represents the mean percent transmission (converted to 2-Log T) of nine determinations on each of seven standard bilirubin solutions of known concentrations. The letter "b" represents two identical readings.

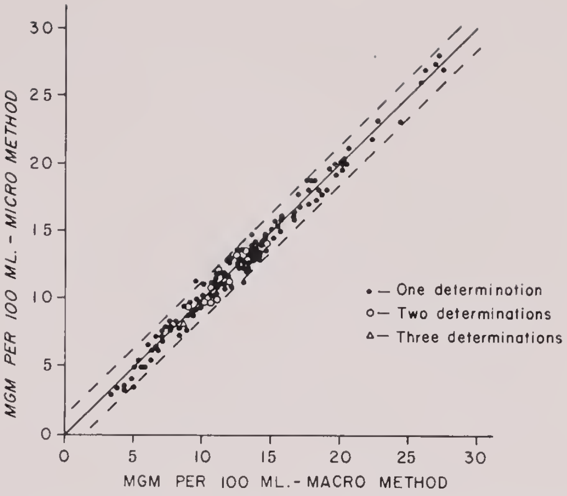

Fig. 3. Correlation between macro and micro bilirubin determinations. Macro determinations by Malloy and Evelyn method modified by Ducci and Watson are plotted against our micro determinations on the same samples to show their approximation to the theoretical perfect agreement represented by the solid line. The broken lines show ± 1.0 m. per 100 ml. All but three determinations fall within 1.0 mg. per cent agreement; 74.5 per cent agree within 2.0 per cent, and 93.7 per cent agree within 5.0 per cent, whereas 0.1 per cent show less than 10.0 per cent agreement.

as suggested in previous literature.[1] Repeat readings at thirty minutes revealed a change in intensity from ± 0.25 to 1.75 per cent transmission.

We have used a wavelength of 550 mu. which provides a slightly broader range of per cent transmission values than the wavelength of 540 mu. Interference from yellow pigmentation was not measurable at either wavelength when more than twenty icteric sera, prepared as for the serum blank in our method, were compared to distilled water. This observation agrees with the work of other investigators.[8,13,14] Hemolysis was not evident in the sera collected by our gentle technique and it should be noted White et al[2] and McGann and Carter[14] added hemolysate to provide levels of hemoglobin sufficient to cause interference. Transmission readings from both the Beckman DU and the Coleman Junior Spectrophotometer on the same specimens were not significantly different.

U.S. Army Hospital (Mr. Small)

The authors are grateful to Miss Elda June Martin, and Robert A. Aldrich, M.D., Department of Pediatrics, University of Washington, Seattle, for review and critical comment concerning the procedure.

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Coronary Reconstruction for Angina Pectoris

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Since the epochal report of Bailey et al showing survival after coronary thromboendarterectomy, the direct surgical attack of coronary artery disease seems to be the most logical and exciting advance in the treatment of this condition.[1-5]

The direct approach is based on the demonstration that patients with angina pectoris have partial or total occlusion of a major coronary artery in the proximal third of the vessel with a relatively normal distal tree.[6] In view of these facts and the major gains already made in the treatment of similar segmental occlusive lesions (carotids, vertebrals, aorto-iliacs), it was only natural to consider application of these procedures, such as resection and graft replacement, endarterectomy, bypass grafts and patch graft, to segmental coronary occlusive disease.[7,8]

We wish to report our experience in dealing with coronary occlusive disease in a 73-year-old white female who had total obstruction of the right coronary artery as detected by coronary angiography and confirmed at surgery.

CASE REPORT

This patient's first myocardial infarction was in November, 1958, at which time all activities were interdicted and she was put on nitroglycerine to allay her anginal attacks. The pains were always substernal and, for the year prior to admission, had typical radiation down the left arm and hand. In October 1961 she had severe anginal attacks but no frank infarction. E.K.G. was compatible with old posterior wall infarction.

Physical examination December 18, 1961, revealed an alert, 73-year-old white lady in no acute distress. There were a few premature ventricular beats but no other abnormality. Results of routine laboratory work, including cholesterol of 154 mg., were in normal range. The electrocardiogram was interpreted as being compatible with subendocardial ischemia but possibly normal for a patient of this age.

In view of the fact that she was a very active individual, despite her age, and was looking forward to enjoying her life without the pangs of angina, it was decided to visualize the coronary vascular pattern prior to any definitive therapy.

Coronary arteriography was done under conditions of elevated endobronchial pressure (+ 40 cm. H_2O) using 20 cc. sodium diprotrizoate-sodium diatrizoate injected rapidly through a catheter threaded under fluoroscopic guidance to the region of the aortic valve. Appropriate films were taken at one second intervals and these revealed non-filling of the right coronary artery. The left coronary artery and its anterior descending branch were well shown. About 2 cm. from origin of the left coronary there was an area of narrowing, assumed to be on an atheromatous basis.

Taking into account the angina of effort not relieved by nitroglycerine, it was evident that a major coronary vessel was totally occluded. This was confirmed by the coronary arteriograms. In view of this evidence it was deemed necessary to open the right coronary artery and direct the flow through normal channels.

Accordingly, on January 4, 1962, the chest was entered through a median sternotomy without violating either pleural cavity. The pericardium was found to contain the usual amount of straw colored fluid. The right coronary artery, in the atrio-ventricular groove was found to be markedly sclerotic and was pulseless. The process, involving approximately nine centimeters of the artery, started a centimeter below its origin at the aorta and extended beyond the atrio-ventricular groove to the origin of the posterior branch, Fig. 1. Following direct vision, open thromboendarterectomy of this vessel, it was found that the thrombotic core consisted mainly of calcified sclerotic debris. Recanalization had produced a negligible lumen but there was good retrograde flow due to well developed collaterals arising from the left coronary, Fig. 2.

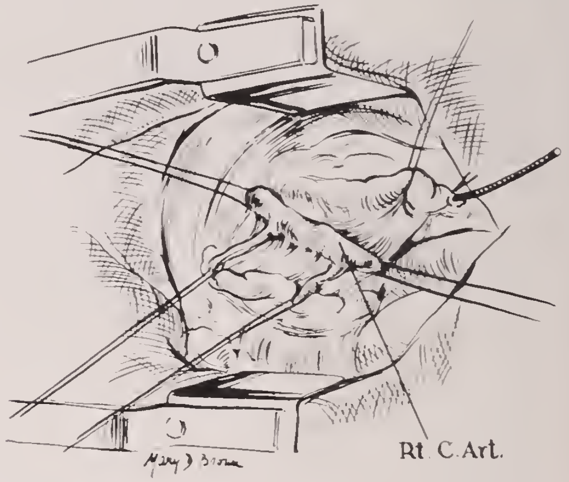

Fig. 1. Median sternotomy. The right atrial appendage is retracted. Tube sutured into the appendage is for intra-atrial transfusion. Retraction of the artery is by umbilical tapes.

Following completion of the endarterectomy it was found that closure of the vessel would markedly reduce the lumen, Fig. 2. Accordingly, a sleeve prosthesis of Teflon was used to reconstruct the passage way, Fig. 3. At the termination of the pro-

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From the department of surgery of Seattle General Hospital.

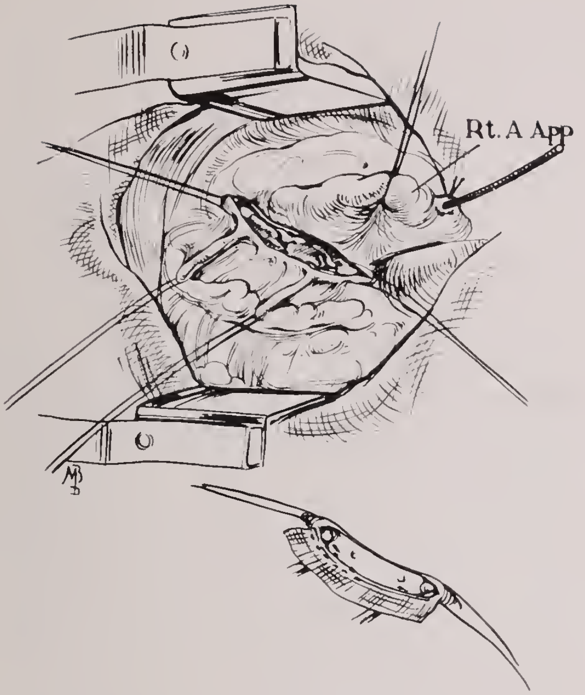

Fig. 2 Upper. Exposure of thrombotic core. The core is shelled out from branches and none is sacrificed. Lower. The artery after removal of the plug. Openings in the wall indicate intramyocardial branches from which there was retrograde flow. Sleeve prosthesis has been placed and sutured to one edge of the arterial wound.

cedure good proximal and distal flows were obtainable. The patient withstood the operative procedure well. She received six units of whole blood.

Postoperatively she had an uneventful course. Drainage tubes in the anterior mediastinum were removed at the end of 48 hours. Heart tones were good. Transaminase levels were normal and the E.K.G. was unchanged. By the fourth postoperative day she was able to ambulate gradually and at no time during her postoperative period did she have any recurrence of angina. She was discharged at the end of two weeks, on anticoagulants.

At the last postoperative check, on June 12, she looked well, had resumed her accustomed vigor and had no angina.

summary

Total obstruction of the right coronary artery was detected by coronary arteriography done under conditions of elevated endobronchial pressure. This was confirmed at the time of surgery.

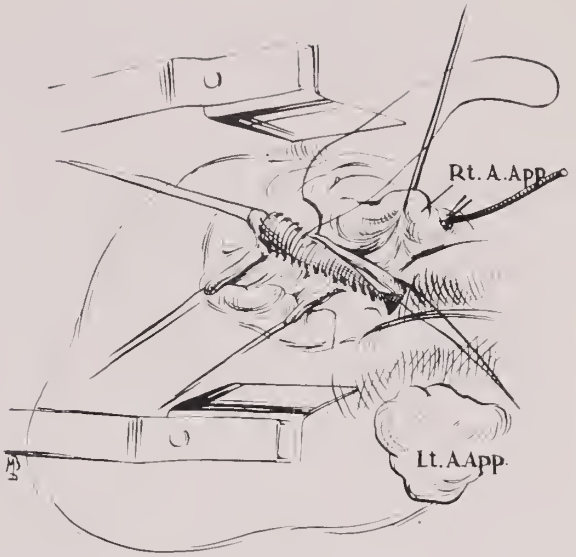

Fig. 3. Suturing of the sleeve prosthesis.

Following coronary thromboendarterectomy, a sleeve prosthesis of woven Teflon was used to reconstruct the vessel.

Six months after surgery she was well and was free from angina.

1215 Fourth Ave. (1) (Dr. Rao)

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Mammography in Proper Perspective

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Clinical acceptance of breast radiography has been delayed, in part, by skepticism and inertia on the part of both surgeons and radiologists. The effort and interest of Gershon-Cohen and associates have literally kept this procedure alive in this country.[1-3] Refinements of technique and interpretations introduced by Leborgne, of Uruguay, have reversed many of this method's past disappointments.[4,5] Egan's experience has further demonstrated the practicability of mammography. His technique combines the use of proper coning, long time interval, inherent tube filtration, low KV and high MA factors with industrial type x-ray film.[6,7] This film features fine grain emulsion quality which allows a greater degree of detail than can be obtained with conventional film. In spite of evident limitations, mammograms of remarkable detail and quality may be obtained by careful attention to this technique. In Egan's first 2000 consecutive mammography studies, he experienced less than one per cent error in diagnosis of malignant lesions.[8] Less than ten per cent of the biopsy proven lesions were regarded radiographically as nonmalignant or indeterminate. Overall diagnostic accuracy was greater than ninety-three per cent and fifty-three clinically unsuspected cancers were detected. Conclusions drawn from this work include:

1. Even in pathology, provisions must be made for indeterminate study in view of evident limitations.
2. Though mammography is not infallible in preoperative diagnosis, it is capable of reducing preoperative diagnostic errors and of revealing unsuspected malignant lesions.
3. Mammography represents an adjunctive procedure in diagnosis of breast disease. It is not regarded as a substitute for biopsy.

technique

Anatomic features of the breast vary with age of the patient, physiological factors, its size and degree of involution. Each breast is radiographed in two projections, craniocaudad and oblique lateral. Films are also obtained of each axillary area to allow inspection for adenopathy. Character of the resulting radiographic product does not permit rapid gross film reading. Rather, it requires more detailed and painstaking inspection, utilizing a bright light source and magnification lens. Systematic interpretation of mammograms is accomplished by evaluation of the following: configuration of the breast; appearance of the skin, areola, subareolar area, nipple, vessels, gland tissue, and axillary areas. The radiation exposure is well within acceptable limits.[9] The gonad dose is of such small magnitude that it has been unmeasurable.

radiographic features

The benign breast lesion is characterized by well circumscribed, regular, homogeneous densities or lucencies which displace but do not invade the surrounding tissue. The retromammary space is clear. Though calcifications may be present, they are few and isolated. On the other hand, the malignant lesion presents a variable, ragged or spiculated, and poorly circumscribed appearance. It is not homogenous and it infiltrates the surrounding tissue including the retromammary space. The characteristic calcifications are numerous, punctate and grouped in and around the nodule. Depending on the stage of the disease, secondary signs of breast cancer are the same as those clinically noted but are commonly appreciated earlier: skin thickening, skin retraction, nipple retraction, venous engorgement, fibrous tissue proliferation and associated axillary nodes.

reproducibility study

The correlation of physical and radiographic findings is capable of producing the greatest amount of accurate clinical information. Nevertheless, any roentgen procedure must possess significant, independent, diagnostic potential. To evaluate the independent, diagnostic value of breast radiography, a study has been sponsored by the Cancer Control Program of the U. S. Public Health Service and the University of Texas, M. D. Anderson Hospital, in Houston.

From the Virginia Mason Hospital and Mason Clinic, Seattle.

Read before the Section on Surgery, Washington State Medical Association Annual Meeting, September 19, 1962.

This project involves the cooperation of twenty-four institutions throughout the United States.* The study procedure will allow significant conclusions concerning the independent, diagnostic potential of mammography, its overall accuracy and reproducibility. It is of further importance as a pilot study of a method leading to more rapid resolution of controversial medical questions.

discussion

It is obvious that lesions in the involuted and predominantly fatty breast are most easily demonstrated. Radiographic interpretation is limited in the small dense breast, in the dense virginal breast, during pregnancy, and in the lactating breast. The presence of diffuse fibrocystic disease may obscure other lesions. Incorrect diagnosis of malignancy may occur in abscesses, infected cysts, or fibrocystic disease associated with marked sclerosing adenosis or ductal hyperplasia or both.

In spite of its limitations, this method does present certain values. It aids in differentiation of benign from malignant lesions with greater accuracy than realized with palpation; it reduces delay in biopsying certain lesions such as equivocal lesions, clinically occult or non palpable symptomatic lesions, and in situations of surgical reluctance because of multiple previous biopsies. It provides documentary evidence, of particular value in subsequent comparison studies.

This method has been shown to be of value in periodic x-ray examination as part of a cancer detection program. Gershon-Cohen uncovered 23 cancers in a series of 1312 women followed for five years.[10] These survey volunteers presented no suspicious breast symptoms or signs at the start of the study, and six of these lesions were not palpable when radiographically diagnosed. It is anticipated that earlier diagnosis with the aid of mammography may significantly increase ultimate survival. These findings are complemented by the survey potential suggested by Egan's findings.

Institution of some age selective, mammography survey program depends, of course, on the successful conclusion of the described reproducibility study as well as other similar studies. Apparent additional obstacles to such cancer detection surveys include those of economic character, the problem of gaining public support, including the cooperation of patient and attending physician, the mechanics of maintenance of records and the prevention of iatrogenic effects.

conclusion

Recognizing the valid limitations, we present the following suggested indications for this adjunctive procedure of breast radiography: 1) to confirm a clinical impression, 2) to evaluate the lumpy breast, 3) to evaluate the painful breast, 4) to evaluate nipple discharge, 5) to evaluate the breast with questionable mass, 6) to follow up hormonal or irradiation treatment of carcinoma of the breast, 7) to detect occult malignancy as the origin of evident metastasis, 8) to study the inverted nipple without palpable mass, 9) to examine the contralateral breast in patients with known carcinoma, 10) to examine the remaining breast following mastectomy for carcinoma, 11) to differentiate benign and malignant lesions but not to replace biopsy, and 12) to counteract cancerophobia, especially in those with positive family history.

In the application of these indications, we recommend that mammography be regarded in proper perspective, that we recognize its values as well as its limitations, that patients be thoughtfully selected, that we exercise proper technique and careful methods of interpretation, and that we recognize its importance as an adjunctive procedure but not as a substitute for biopsy. ■

1118 9th Ave. (1)

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*The Department of Radiology serving the Virginia Mason Hospital and Mason Clinic is participating in this study.

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Characteristic Confrontation

The Unifying Principle of Psychotherapy

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Thisi s a critique of the psychiatrist's function. It has been reasoned from the clinical facts of human development in health and disease as well as from a synthesis of well accepted theoretical concepts. It is intended as a rational marriage of theory and practise. The purpose is to offer an integrated picture of the psychiatrist's role from the point of view of the patient who needs him and of the best in behavioral science theory that should make him a highly trained biological scientist. The point presented is that the psychotherapist should be an idealized authority or parent figure in the tradition of medicine as well as a highly trained scientist in psychobiology.

Confront means to come face to face. The psychiatrist's principal technical interventions are labeling, making observations or confrontations, interpretations and reconstructions, interspersed with varying quantities and types of facilitation cues. Of these I feel confrontation is the technique employed far more often than all others combined.

definition

Constant characteristic confrontation may be defined as a consistent operational attitude, or set, with dynamic, economic and structural qualities, that governs the form and directs the energy of the psychiatrist's interventions. It is directed to the patient's perception and is intended to make him forcibly aware of his behavior which has the greatest impact of functional disturbance, i.e., that which registers upon the psychotherapist's perception with the greatest feeling of disharmony or disease. Clinically, these disturbances include examples of faulty perception, judgment or synthesis, and ego or character defects and their derived symptoms.[1,2] Such aberrations continually transmit energy which evokes anxiety within him or his objects or both. Characteristic confrontation is the psychotherapist's unified response to the patient's total behavior, particularly to the diseased or regressive elements. Thus it may go beyond simple labeling or observing to possibly employ all modalities of expression within the clinician's conceptual and expressive potential. *It implies maximum rational utilization of his professional function.* Thus it utilizes those interventions that will best initiate or advance changes in the form or awareness of displaced instinctual energy, since such mobilization constitutes the essence of affective abreaction with insight.

theoretical and clinical rationale

Human personality and character is in continuous evolution consequent to the impact of instinctual energy and external reality upon a central ego control organization. It is thus an adaptation to growth.[3] This may be toward greater unity, integration and health or toward disunity, fixation, regression or disease. Either health or disease once established tends to assume a certain ongoing pattern. Because of man's prolonged dependency his development is highly vulnerable to interruptions and special developmental vicissitudes. However, all human psychobiological experience indicates that the immature organism yearns to be integrated, matured, and structured. This is seen in all infants as they pass through the stages leading to object relationship. *It is my contention that all individuals who have not attained optimal development, i.e., functioning essentially free of neurotic anxiety, continue to search for objects that may help them attain this level of development.* This striving is what permits us to function in our professional capacity for a single day. I believe the psychotherapist's role includes serving the patient both as a physician and as an objective parent.

The personality is under the control of the central ego organization which strives to organ-

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Read before Section on Psychiatry, Washington State Medical Association, Annual Meeting, Spokane, Washington, September 17, 1962.

ize the complex input from instincts, psychic institutions and external reality. While many functions have been attributed to the ego, the major ones that concern us are: (A) *perceiving* of the external world and of the self, (B) critical-evaluative *judging*, (C) *dealing with anxiety*, including formation of the mechanisms of defense and (D) *synthesizing* this complex input into a unitary response.

As Stone[4] points out, the analytic physician should be in his ultimate, positive, parental identification. In this role he will include reports of the patient's defects of perception, judgment, synthesis, or character, while supporting him in the therapeutic relationship. Clearly he will not offer him replacement services since to do so would foster dependency and retard development. *Our job is to employ every rational means that will advance a state of greater adaptation and health.*

psychiatric disease formation

Certain vicissitudes of psychosexual development constitute sources of fixation which in times of stress may serve as potentials for regression. This may result in anxiety-producing symptom disease. Or anxiety may be neutralized by constant defects in the ego or character structure. Energy involved in symptoms or in such defects is nevertheless lost to central ego

A List of Commonly Misunderstood Psychiatric Terms with Definition or Descriptive Analogy

1. **Ego.** That part of the mind that works for self preservation by regulating the responses of the total personality to the often conflicting demands reaching it from the outside world and from within itself. Also, the self concept.
2. **Synthesis.** A function attributed to the ego that integrates the various factors making up the personality. Also that mental force that impels the individual to harmonious unification and creativity.
3. **Synthetic Function.** See Synthesis.
4. **Energy.** The propelling force behind all psychic action, believed ultimately to arise from the soma.
5. **Instinct.** A primal trend or urge that cannot be further resolved, representing the body's biological needs. Instinct acts through the psyche to secure gratification of need by contact with the outer world, the source of psychic energy.
6. **Objects.** That in or through which the instinct achieves its aim or satisfaction. The infant's earliest external objects are his parents or parent surrogates; the whole or a part of the self may also be an object, i.e. narcissism.
7. **Psychic Institution.** A division of the mind or psyche: For example, the conscience relates to the moral, esthetic and ethical attitudes acquired during development and training.
8. **Conceptual and Expressive Potential.** In this paper, the psychiatrist's capacity to grasp the total meaning of his patient's problem and present manner of adapting to it and his ability and skill in communicating this knowledge back to his patient.
9. **Facilitation Cues.** Any stimulus, such as a question, glance or demand through silence that assists the patient in further unfolding the account of his problem.
10. **Transference.** An energy or force proceeding from the patient that attributes to new objects (in psychotherapy, to the clinician) the characteristics of old ones and attempts to reestablish or relive an infantile situation once either greatly enjoyed or greatly missed.
11. **Countertransference.** Similar to above, except proceeding from the clinician toward his patient. Almost always inappropriate since it may interfere with obtaining an objective concept of the patient and his problem.
12. **Repression.** The active process of ejecting or banishing from conscious awareness ideas or impulses that are unacceptable, particularly those of sexual or aggressive nature.
13. **Abreaction.** The process of returning to conscious awareness and adequate expression material that has been repressed. Recall and reexperience of both the intellectual idea and the emotion are involved.
15. **Introjection.** To form by identification a picture of an object and then introduce this into the ego or self concept. A psychological process of assimilation.
15. **Regression.** To return to an earlier level of adaptation. Usually involves childlike or infantile aspects of behavior inappropriate to mature functioning.

control. This energy deficit places a constant stress upon the synthetic function and renders the ego liable to increased anxiety whenever it meets demands from any direction. The causality principle[5] requires that the ego's disturbances of function be strictly accounted for in conscious awareness. Since the fixating events have been dynamically repressed or projected, this forces defects in perception, judgment and synthesis. With energy supply depleted and with faulty perception and fixed defects in judgment, the ego cannot synthesize a unitary type response. Thus it becomes chronically vulnerable to anxiety which dictates further repression, initiates further regression and anxiety. This is the well-known circular action of anxiety within the ego.[6]

the phenomenon of transference

Instinctual drives withdrawn from central ego control that present, either as psychiatric disease or character defect, constantly transmit energy. Actually the energy of the total organization, both healthy secondary process and regressed or primary process, can be viewed as always being transferred. This refers to the sum of life experience—all that one has been, all that one is and all that one hopes to become. I refer to this phenomenon as *total behavior transference* to distinguish it from the usually understood form. In the psychotherapeutic relationship this usually assumes a strong valence and direction which can and should be registered within the therapist's perceptual and integrative ego. Because the patient either fails to perceive or else misperceives his behavior in greater or lesser degree, he clearly needs the clinician observer, not only for the latter's expected greater intactness of perception, judgment, integrative and synthetic functions, but also for his ability to conceptualize and report back consistently the patient's aberrant disturbed behavior.

In summary, we see the patient's position as a needy one. Just as the immature dependent child needs and requires his parents' strength of control over instincts and their matured judgment and perception, so does the patient require the supplemental ego functions of the psychotherapist.

the psychiatrist's major functions

Classically the role of the psychiatrist is non-condemning, non-critical, non-judgmental and accepting.[7] However this ideal role is often misunderstood and misapplied both in the withholding of necessary activity or in the exhibition of misconceived activity. First, what are the rational functions of the psychiatrist? They are:

(1) To limit primitive instinctual presentations which the patient's ego cannot control. At times this may involve setting limits and controls; however, in most cases this function is largely implicit because of the patient's dependent, expectant attitude.

(2) To perceive, conceptualize, identify, label, reconstruct and interpret manifestations of the patient's regressive, unhealthy behavior. Such consistent reporting can be received by the patient as a massive supplementation of his malfunctioning ego. Since all movements either towards health or disease begin as a gain or a loss of awareness of a fragment of experience, confrontation tends to force the energy of these dispersed or diseased quotients back into awareness. This is the cardinal first link in the chain working toward ultimate recapture of this energy by the synthetic function. This is the greatest possible justification for making maximum use of the psychotherapist function.

(3) Finally, the patient utilizes the psychotherapist as a model for imitation and identification. This occurs whenever an unintegrated, unstructured, or immature organism interacts with a more structured, matured, or integrated one. Such fragments of behavior are essentially borrowed for an experimental period of time. They serve as intermediate positions on the way toward an unique life experience for the patient. They may become introjected and thus acquire permanent status within his total experience when they happen to be compatible with the patient's healthy functioning.

some typical faulty or distorted application of the psychiatrist's role

Is a quiet observational role adequate? Should he just sit and observe, collect impressions and data? Although this role is neutral enough it may not afford the help the patient needs. Contrariwise, active authoritarian direction and control, while satisfying the need for limits, may gratify passive dependent trends and interfere with the patient's need, and right, to resume an independent existence. Furthermore countertransference confession and role-taking violate the principles of neutrality so necessary to preserve or to orient the patient toward self-sufficiency. Since we cannot constantly interpret, reconstruct or supply facilitation cues, characteristic confrontation appears to be an operational and technical advance.

Before he can practice efficiently the psychiatrist must possess thorough technical knowledge of personality evolution and of the ego's typical functioning in health and regression. He must be competent in transference and countertransference analysis; these special skills permit the detection of even slight problems in object relationship and provide insight into ego distortions. Such knowledge and diagnostic skill is prerequisite for character confrontation particularly since this may be employed early in the first interview. *Nothing is so reassuring as the early correct recognition of the patient's disease; this awareness is best acknowledged through the clinician's demonstrating his conceptual grasp by reporting back properly-timed observations in response to the illness or malfunctioning shown to him.* This is the ultimate in acceptance and the foundation of all rational therapy.[8] The psychotherapist so prepared is in his ultimate commitment as a positive parental identification[1] to his child-patient. All patients, even the most resistant, are childlike in their needs and expectations. They seek the acceptance and wisdom of the idealized parent-physician that can help them find themselves. Even the most provocative hope to have their anxious fears disproved.

TWO TYPICAL CLINICAL EXAMPLES

Case 1. A 19 year old college coed arrived for her first interview clad only in a halter, and jeans cut off at the mid thigh. She was barefoot. Her hair was in complete disarray as though she might have ridden wildly through the streets on a motorcycle. She rushed into the consulting room and began pouring out a tale of woe. She had been ordered to see me by the University Counseling Service because she was failing and had suddenly fainted in class. Her boy friend, whom she wanted to marry, was acting very disinterested now that they were sleeping together regularly. She was being fired from her job where she got room and board in return for babysitting. This firing was because the baby's mother felt the girl was disturbing her marriage by getting too much attention from the husband. Did I realize how desperate she was; perhaps a suicide was preferable to failure and to becoming a prostitute? As she recounted this story she rapidly crossed and recrossed her bare legs, pulled at the straps to her halter bra and wiggled her bare toes in my direction while continuing to smile and shift her seat seductively on her chair.

As this rich verbal and nonverbal performance bombarded me I became aware of a mixture of pity for her plight, of some doubt whether she might be a psychopathic schizophrenic, and had a distinct feeling of anger over the gross sexual provocation. I developed a strong mixed feeling at this image of a fetching yet irresponsible, somehow helpless wench, who was nevertheless teasing me outrageously while seemingly enjoying it. Accordingly I directly said to her, "You give me a feeling of acting half crazy and yet pitiable while all the time trying to get me to make a pass at you. I wonder whether you want me to buy you a meal and some clothes put you up in a room and then have intercourse with you all in that order?"

First her face assumed a fleeting look of shock which was broken by a relieved hysterical laugh that was immediately replaced by deep, convulsive weeping. After composing herself somewhat she admitted her clothing was a deliberate provocation —after all, the University treated her as though she were crazy by ordering her to a psychiatrist or face expulsion. Next she sobbed out her feeling of dirty worthlessness consequent to being unable to break off her affair. She didn't want to be promiscuous yet couldn't stop. Then she added that her father treated her as though she were no damn good, always blaming her for the chaos at home which was why she had moved away. She added she was glad I had not become angry or excited by her teasing behavior. On her next visit she came appropriately dressed and groomed seeking help for her problem.

Case 2. A rather obese, highly intelligent, and sophisticated theoretical physicist appeared for his first interview to discuss possible psychoanalysis. In a perfectly ordered account he told of his two previous failures at analysis with two analysts in another city, adding that he came with the profoundest doubt that he could ever be helped with his total sexual impotence and high-grade work inhibition. He next proceeded with a minutely detailed account of his life from his ninth year, stating he could remember nothing prior to that time. He still vividly recalled an episode during that year when, in agonizing paralysis of fear and trembling, he could not come to his mother's assistance. as she lay helplessly in her bath getting electrical shocks. He stated he was lying on his bed in the next room, clearly could hear her cries for help but was quite unable to move a single muscle to go to her aid. Throughout this recital he fixed me with eyes that seemed unnaturally bright, even sparkling with intense merriment. In fact the upper half of his face seemed to reflect enormous amusement while his mouth and lower jaw were twisted downward into an attitude I interpreted to be intense, even desperate, despair. He recounted his story in perfect grammar with an absolutely dead flat affect. I began to feel I was witnessing a most macabre, graveyard scene vividly described by the corpse himself who viewed his own living interrment with boundless, sardonic humor.

I began by acknowledging his obvious high intelligence and the extremely well-connected account of his life history remarking, however, it was so detailed and interconnected that it made me completely disbelieve he or anyone could possibly remember all that. I added he must be desperately depressed by the fact that he had not been able in 40 years to think his way into health and happiness. Next I pointed out the extreme split emotion betrayed by his facial expression, the eyes and upper face bespeaking intense, even violent, mirth while his lower face and his story were documentation of despair.

His first response was a vigorous protest. He said it was so unanalytic for me to recognize his intelligence and in the same breath attempt to discredit it entirely. And what did I mean by talking about the bright amused excitement in his eyes while telling him he was deeply depressed? He said he just didn't believe it. I noticed however that the look of sardonic amusement was somewhat abated and so flatly stated to him. He continued with his rebuttal attempt during the balance of the hour but did observe toward the end that it might be intellectually stimulating to work with a doctor who had such an original approach. I commented that he must have greatly overworked intellectualizing as an attempted protection against feeling helpless and that to face such feelings doubtless would involve intense suffering for him.

I hope these excerpts will illustrate the principles I have spoken of. The first example sketches the more obvious broadcast of out-of-control emotions through evident inappropriate appearance, attitude and manner. It details how anxiety, shame and worthless feelings were acted out by the patient's dramatizing herself as crazy, seductive, hungry and bereft. I hope it also demonstrates how a direct recognition and reflecting back of this composite state produced an immediate uncovering of her more basic concern.

The second example illustrates the technical handling of deeply entrenched defense mechanisms with severe splits in affect and ideation, and affords a glimpse into the anxiety-overpassivity that such characterological defects attempt to cover. Before the patient was half through the first hour I was convinced his two previous treatment failures had resulted from the patient's having overwhelmed the doctors, and the therapeutic process, in a sea of intellectualizing words. I was determined to cut through this wall by direct frontal attack upon the glaring inconsistencies depicted in his total behavior.

summary

All functional psychiatric disease is seen as the consequence of fragments of energy withdrawn from the main life stream. Critical ego defects of perception, judgment and synthesis are lived out through symptom disease or character defect. This chronic functional impairment renders the patient greatly dependent upon the more intact ego-functioning of an external observer such as the clinician. The latter fulfills a vital role by rendering continuous, comprehensive, observational reports upon the totality of the patient's faulty functioning. Characteristic confrontation is seen as affording increased range and depth to this most important reporting back. Such a demonstration of understanding affords distinct advantages in building patient acceptance of the therapeutic process. Since this technique may be applied either during initial or early interviews as well as at any time during treatment it seems to afford unique advantages. These are particularly evident with character and ego defect states and in all cases whenever regressive forms of expression predominate. It can provide a most helpful link between theoretical assumptions and practical clinical facts in the complex work of psychotherapy. ■

1110 Harvard Ave. (22)

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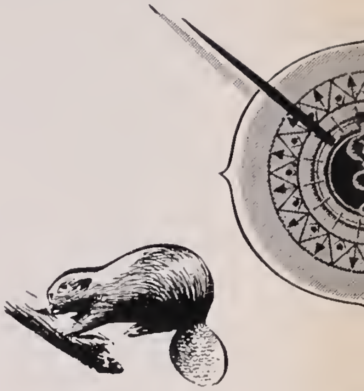

Oregon State Medical Society—2164 S. W. PARK PLACE, Portland 5, Oregon

PRESIDENT *Melvin W. Breese, M.D., Portland*
SECY.-TREAS. *James H. Seacat, M.D., Salem*
EXECUTIVE SECRETARY *Mr. Roscoe Miller, Portland*
annual meeting, September 25-28, 1963, Portland

Legislation, Public Health and MAA Claim Trustees' Major Attention

The Board of Trustees of the Oregon State Medical Society held its 1962 December meeting in the afternoon for the first time in at least two decades. The Board at its November meeting voted to hold afternoon sessions during the months of December, January and February of this Society year. Therefore the meeting on Saturday, December 8th began at 2:00 o'clock and adjourned at 5:30.

Major problems which confronted the Trustees were the reports of the Committee on Public Policy regarding its recommendations on contemplated State legislative measures, of the Committee on Public Health regarding matters relating to immunization, and of the Committee on Charitable Medical Care regarding revisions in the Medical Assistance for the Aged (Kerr-Mills) program in Oregon. The Board also heard reports from the Society's delegates to the American Medical Association on the principal actions of the House of Delegates at the 1962 Clinical Session and considered a number of important miscellaneous matters.

Public Policy

The Board of Trustees adopted four recommendations contained in the report of the Committee on Public Policy. The report which was presented by Clinton S. McGill, its Chairman, recommended:

1. **That any legislative proposal to amend the Oregon Workmen's Compensation Act should contain the following four provisions recommended by the Committee on State Industrial Affairs and that the Society express a willingness to consult with the sponsors of any such legislation regarding these provisions:**
    a. **An amendment to remove from the Workmen's Compensation Act the provisions that the State Industrial Accident Commission is authorized to establish rules and regulations for the "transporation, medical and surgical attendance and hospital accommodations for the injured workmen and to contract therefore in its discretion" and substituting language which will reflect the principle that the Commission's rules and regulations shall make it possible to provide the highest quality of care and management of each case involving an injured workman on a continuously current basis.**
    b. **An amendment providing for the establishment by statute of the Medical Advisory Committee to the State Industrial Accident Commission which is now provided for in the present Rules and Regulations of the Commission.**
    c. **An amendment to the provision relating to fees to be paid for professional services to provide that such fees "shall conform to rates generally prevailing." This amendment plus amendment b above were considered by the Committee on State Industrial Affairs to give adequate assurance to the medical profession of the state that it would have a voice when the rules and regulations and the fees for professional services were being considered by the Commission.**
    d. **An amendment providing that when the injured workman or his beneficiaries elect to recover from an employer in violation, or a third person, the attending physician is no longer bound by the rules and regulations and the schedules of fees established by the Commission.**
2. **That the Society sponsor at the 1963 Oregon State Legislative Assembly amendments to the Hospital Licensing Act specifically providing that the Oregon State Board of Health shall not have responsibility for promulgating rules and regulations related to the professional care of patients.**
3. **That the Society not sponsor or support legislation amending the Oregon Basic Science Law to provide that Part I of the examination of the National Board of Medical Examiners may be accepted in reciprocity.**
4. **That the Committee on Public Policy be authorized to sponsor a "Key Man" Conference to be held in Salem on a midweek day while the 1963 Oregon State Legislature is in session.**

The recommendations relating to the Workmen's Compensation Act were developed in cooperation with the Committee on State Industrial Affairs in view of the contemplated introduction of a "Three-Way" bill and possibly other similar legislative proposals at the 1963 Session of the Oregon State Legislature. It was the conviction of the two Committees that the recommended amendments would give reasonable assurance that the best interests of both the injured workmen and the medical profession would be served.

The legislative proposal amending the Hospital Licensing Act was recommended inasmuch as the text of the present law might be interpreted as giving the State Board of Health authority to make rules and regulations related to the practice of medicine by physicians in the hospitals of the State. The Committee believed that the control and regulation of the practice of medicine in Oregon is adequately covered in the Medical Practice Act and is therefore the legal responsibility of the Board of Medical Examiners and should be limited exclusively to that Board.

The Committee also reported that the bills have already been drafted for those legislative proposals which the Society will sponsor at the 1963 Legislative Session. These three proposals include a bill amending the 1961 "Morbidity and Mortality Studies Act" to provide that information and material used by in-hospital staff medical committees shall be confidential and not admissable in court, an amendment to the Medical Investigators Act to provide for the inclusion of Multnomah County; and a bill providing for the confidentiality of the records of hearings on commitments to State mental hospitals.

The Board of Trustees voted to assign additional legislative proposals to the Committee on Public Policy. These include legislative proposals related to the use of amphetamines, the control of addicts and addiction, requiring seat belts in all new automobiles, and a request that the Society support the continuation of a skeletal deformities control program at Oregon Fairview Home and the construction of facilities to house the unit.

Public Health

Edgar M. Rector, Chairman of the Committee on Public Health, presented five recommendations of that Committee, four of which were adopted by the Board. Those adopted are as follows:

1. **Relative to the utilization and administration of influenza vaccine:**
   (1) That the Society urge that, in the administration of influenza vaccine, priority be given to the following high-risk groups: a. The aged, b. Individuals suffering from chronic diseases, especially those involving the respiratory tract, c. Pregnant women, d. Individuals engaged in occupations vital to public service.
2. **That the Society strongly recommend to all citizens of the State that a high-level of immunity be maintained, especially for tetanus, diphtheria, smallpox and poliomyelitis, and that in cooperation with the Oregon State Board of Health appropriate publicity be given to this recommendation.**
3. **That the Society endorse the principle that individuals with special medical conditions should be encouraged to carry appropriate identification conveying pertinent information and that preference be given to a more permanent and easily seen or found device such as an emblem attached to a bracelet or necklace.**
4. **That Dr. Harold Osterud and Mr. Roscoe Miller be authorized to continue as the Society's official representatives on the interagency committee established to develop programs on the effects of smoking to be used in high school education classes.**

The Board of Trustees, however, did not approve a recommendation of the Committee relative to the utilization of Sabin oral poliomyelitis vaccine. In this recommendation the Committee suggested that physicians be advised not to administer Type III vaccine until the current situation is clarified and continue to use the Salk vaccine as offering the only complete immunization against all three types of poliomyelitis vaccine. In turning down this recommendation, the Board expressed the belief that the physicians of Oregon are already well informed through bulletins issued by the Oregon State Board of Health and other sources regarding the status of the oral poliomyelitis vaccine and that further emphasis was unnecessary.

Medical Assistance for the Aged

The Society's Committee on Charitable Medical Care under the chairmanship of Stanley A. Boyd has been meeting for several months with representatives of the State Public Welfare Commission and the reactivated Governor's Advisory Committee on Medical Assistance for the Aged to consider revisions in the Kerr-Mills program in Oregon which should be recommended for the 1963-1965 biennium. The Governor's Advisory Committee is chairmanned by Ennis Keizer of North Bend, the Chairman of the State Public Welfare Commission and James H. Seacat of Salem is the Society's official representative on this five man Committee.

At the Board of Trustees meeting on December 8th, Dr. Boyd said the Committee recommended the Society's approval of proposed revisions in the benefit structure and four basic changes in the administration of the program.

For the medical and surgical benefits the Advisory Committee was proposing to recommend the coverage offered by the National Blue Shield Senior Citizen program in Oregon which is as follows:

Surgery—in or out of hospital.
Assistant-at-Surgery—for major surgical procedures when no house staff assistant is available.
Anesthesia—for covered surgery.
Daily Hospital Calls—70 days per confinement including necessary consultation (maximum 30 days per year for TB, nervous and mental conditions).
Radiation Therapy—in or out of hospital, if billed by physician.

Diagnostic X-ray—within 72 hours after accident.
Other Diagnostic X-ray and Lab.—if billed by physician while member is in-patient (not normally applicable in Oregon).
Nursing Home Visits—One per week up to 13 weeks, if transferred directly from hospital.

For the hospital benefits, the recommendations were for the coverage being offered for persons over sixty-five wears of age by Blue Cross of Oregon. This Blue Cross program includes thirty days hospitalization per year with a $15 per day allowance toward room and board charges and 80 per cent of the hospital extras.

The administrative changes being recommended ed to the Governor by the Advisory Committee are that:

1. **The program will be aimed at a population of approximately fifteen thousand potential eligibility rather than the fifty-five thousand as originally proposed.**
2. **The medical, surgical and hospital benefits of the program will be contracted on a bid basis to a private carrier with the Public Welfare Commission retaining the administrative functions of (a) determination of eligibility; (b) audit of billing and payment procedures; and (c) the administration of charges against individual beneficiaries and maintenance of their accounts.**
3. **All activities related to billing, claims administration, audit of bills, etc., to be contracted on competitive bid basis to carrier or plan which can most economically administer these functions.**
4. **The nursing home care to be provided as a direct vendor payment program of the Commission for those individuals over age sixty-five who are eligible under the economic limits of the MAA and who qualify as requiring nursing home care when classified by the agency's current point system. Nursing home care then would no longer be offered as a part of the OAA program and would be dropped from the standards of that category. All nursing home benefits for the over sixty-five will be under the program of MAA.**

The Board of Trustees approved all recommendations except the administrative change relating to the transfer of all nursing home care for the aged completely to the MAA program. Under such a practice, the vendor payments for nursing home care now provided to persons over sixty-five years of age in the Old Age Assistance program and other categories would be removed from those programs and transferred to the Medical Assistance for the Aged category. This apparently is permitted under the federal laws and the regulations of the Department of Health, Education and Welfare. Nevertheless, the Board of Trustees believed that MAA funds should be used for that category of the aged only and therefore expressed its disapproval of the proposal to make such a transfer.

Miscellaneous Actions

Among the numerous other actions of the Board of Trustees at its meeting on December 8th were the following:

1. **Approved a recommendation of the Board of Trustees of Oregon Physicians' Service that Louis J. Feves of Pendleton be elected a member of the OPS Board of Trustees to fill the unexpired term of the late S. J. Simons of Pendleton.**
2. **Approved the applications of George K. Armen of Portland and Archie McMurdo of Heppner for Life Membership and the applications of John G. Cheetham of Marlin, Texas and Irwin I. Boehr of Portland for Active Member Emeritus status.**
3. **Voted to recommend to Governor Mark O. Hatfield that he reappoint John G. P. Cleland of Oregon City and Gerhard B. Haugen of Portland to succeed themselves as members of the Oregon State Board of Health for a four-year term expiring January 15, 1967.**
4. **Voted also to recommend to Governor Hatfield that he appoint A. O. Pitman, Sr., of Hillsboro to fill a third position on the Oregon State Board of Health which until recent years has been held by a doctor of medicine.**
5. **Voted to refer a resolution introduced by the Lane County Medical Society proposing that, "the Board of Trustees evaluate the progress being made by Oregon Physicians' Service in reaching its objective to the satisfaction of the physicians of the State and consider the continuation of the Society's sponsorship," to the Committee on Prepaid Medicine. The action of the Board of Trustees in addition to the referral directed the Committee to submit its recommendations to the Board of Trustees at its January, 1963 meeting.**

A Doctor Returns to the House

By the election of Morris K. Crothers of Salem to the State House of Representatives for the 1963 Session of the Oregon State Legislature, physicians are again represented in the Oregon Legislative Assembly. Since 1931 there has been a doctor of medicine in the State's Legislative Assembly with the exception of the sessions of 1949, 1957 and 1961. A physician's wife, however, became a member of the Assembly for the 1961 Session when Mrs. E. G. Chuinard was elected in the West City Subdistrict of Multnomah County. She was re-elected to serve in the House at the 1963 session.

It is interesting to note that at two sessions, 1937 and 1941 there were five physicians and in 1939 and 1943 there were four. A complete list of the physician members of the Oregon State Legislature from 1931 and including the present 1963 Session follows:

1931 Session
Senator Joel C. Booth (R), Lebanon

1933 Session
Senator Joel C. Booth (R), Lebanon
Representative James A. Best (R), Pendleton
Representative F. H. Dammasch (R), Portland

1935 Session
Senator James A. Best (R), Pendleton
Representative C. T. Hockett (R), Enterprise
Representative J. F. Hosch (D), Bend

1937 Session

Senator James A. Best (R), Pendleton
Representative C. T. Hockett (R), Enterprise
Representative Archie K. Higgs, (D), Portland
Representative J. F. Hosch (D), Bend
Representative A. Orville Waller (R), Eugene

1939 Session

Senator James A. Best (R), Pendleton
Senator Joel C. Booth (R), Lebanon
Representative C. T. Hockett (R), Enterprise
Representative J. F. Hosch (D), Bend

1941 Session

Senator James A. Best (R), Pendleton
Senator Joel C. Booth (R), Lebanon
Senator H. R. Kauffman (R), Toledo
Representative C. T. Hockett (R), Enterprise
Representative J. F. Hosch (D), Bend

1943 Session

Senator James A. Best (R), Pendleton
Senator Joel C. Booth (R), Lebanon
Senator H. R. Kauffman (R), Toledo
Representative F. H. Dammasch (R), Portland

1945 Session

Senator Joel C. Booth (R), Lebanon
Senator William A. Moser (D), Grants Pass

1947 Session

Representative F. H. Dammasch (R), Portland

1949 Session

No physician members.

1951 Session

Representative F. H. Dammasch (R), Portland

1953 Session

Representative F. H. Dammasch (R), Portland

1955 Session

Representative F. H. Dammasch (R), Portland

1957 Session

No physician members.

1959 Session

Senator Edwin R. Durno (R), Medford

1961 Session

No physician members.
Representative Mrs. E. G. Chuinard (R), Portland

1963 Session

Representative Morris K. Crothers (R), Salem
Representative Mrs. E. G. Chuinard (R), Portland

The Society's records also show that Andrew C. Smith of Portland was a Republican member of the Senate in 1901 and 1903. Dr. Smith served in the legislature again at the 1915 Session as a Representative from Multnomah County. It was at the 1903 Session that Dr. Smith introduced and obtained the passage of the bill creating the Oregon State Board of Health. He was President of the Society in 1896-1897.

Coverage for private flying added to society disability insurance plan

The increasing number of physicians who are flying their own planes has led the Insurance Company of Oregon to add protection against disability arising out of a plane accident to the Society's disability insurance program. This additional protection has been approved by the Society's Committee on Professional Welfare and is now available to physicians upon request.

Members of the Society who are participating in this insurance program and wish to add the protection for private airplane flying should write to the Society headquarters office for information. The additional benefits apply both to the weekly indemnity and the accidental death benefits.

President Breese begins visits to component societies

President Melvin W. Breese has scheduled visits to all 25 component medical societies during the 1962-1963 Society year. Dr. Breese has selected the "Quality of Patient Care" as the theme for his year as President and is presenting to component societies a proposal for a continuing study and evaluation of this subject both at the component society and state medical society level. On these visits, Dr. Breese is accompanied by a member of the Oregon State Board of Medical Examiners and a member of the Oregon State Board of Health.

On his first trip, Dr. Breese visited the Baker County Medical Society and the Malheur County Medical Society on October 15th and the Union County Medical Society and Umatilla-Morrow County Society on October 16th. On this trip Dr. Breese was accompanied by Dr. Jon V. Straumfjord of Astoria, representing the Oregon State Board of Medical Examiners and by Dr. Jack W. Grondahl of Pendleton of the Oregon State Board of Health.

The next visit was to the Klamath and Lake County societies. The latter was visited on November 13th at lunch in Lakeview with 100 per cent of the Lake County physicians present. That evening Dr. Breese met with the Klamath County physicians. On this trip, Dr. Ray L. Casterline of Medford represented the Board of Medical Examiners and Dr. Forrest E. Rieke of Portland the Oregon State Board of Health.

In December Dr. Breese visited the Josephine County Medical Society and the Jackson County Medical Society on December 11th and 12th and the final visit for 1962 was with the Clackamas County Medical Society on December 18th.

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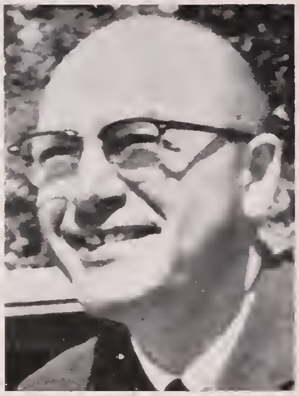
SECRETARY	*Wilbur E. Watson, M.D., Seattle*
EXECUTIVE SECRETARY	*Mr. R. W. Neill, Seattle*

annual meeting September 15 - 18, 1963, Seattle

Vancouver Urologist a Silver Anniversary All-American

Robert E. Fitzgerald, of Vancouver, has been named a Silver Anniversary Award winner by *Sports Illustrated.* Those selected by the magazine played their last varsity game in 1937. For Dr. Fitzgerald, this was at the University of Chicago where he won three letters in football and was captain of the team his last year. He received his medical degree in 1943 from the same university. In addition to playing football in his undergraduate days he won two letters in basketball and was a member of the track team. His versatility was demonstrated in numerous campus activities, prominent among which was membership in the Blackfriars for whose musical shows in 1934, '36, '37 and '38 he composed most of the score.


ROBERT E. FITZGERALD, M.D.

The award was given after nomination by the University of Chicago but the judges relied on his family and community life fully as much as they did on his record while in college. He has been an active participant and leader in many church and community organizations and is a member of at least a dozen professional societies. He is a member of the faculty of the University of Oregon Medical School and has been president of the Oregon Urological Society as well as of his own county medical society. He was a lieutenant, JG, USMR, during World War II.

Most notable of his achievements, however, has been the gift of a full and satisfactory life to his 13 year old daughter, Catherine Louise, youngest of his four children. She has been blind since the age of 18 months. Like her father and mother, she is an accomplished musician and an athlete of more than average ability. She swims with an A A U sanctioned club team and skis vivaciously with the rest of the family.

The award was made at the National Football Hall of Fame Banquet held at the Waldorf Astoria in New York City early in December.

Medical Genetics Course at U W

A three day course in genetics will be given at the Health Sciences Auditorium, University of Washington School of Medicine, Seattle, March 6-8. The course has been planned to aid practicing physicians in recognition and handling of diseases in which genetic factors are known to be significant. This comprehensive course will include discussion of fundamental concepts as well as practical suggestions in clinical management. U W faculty members will be Arno Motulsky, Eloise Giblett, L. M. Sandler, Ph.D., S. M. Gartler, Ph.D., and Amelia Schultz, Ph.D. Guest faculty members will be Alfred J. Knudson, Jr., Chairman of the Department of Biology, City of Hope Medical Center, Duarte, California, and Victor McKusick, Professor of Medicine, Johns Hopkins Hospital, Baltimore.

Heart Association Award to Merritt Stiles

Merritt H. Stiles, of Spokane, has received the Award of Merit from the American Heart Association in recognition of his work in the state and national heart organizations. He was president of the Washington State Heart Association, of which he was one of the early organizers, from 1954 to 1956. He has been on the Board of Directors of the national organization since 1955 and was vice-president from 1959 to 1962.

In addition to his work in furthering education in heart disease, and research in cholesterol control, he is an enthusiastic skier. This fact was not missed by the Heart Association in the citation. He has been president of the Pacific Northwest Ski Association and of the National Ski Association.

Siperstein and Copp Guest Speakers at Diabetes Meeting

Annual symposium on endocrinology and metabolism, sponsored by the Washington Diabetes Association, will be held in room E-209, Health Sciences Building, University of Washington, Friday, February 8. The one day meeting will be addressed by two authorities on special aspects of metabolism. Marvin D. Siperstein, Associate Professor of Medicine at the University of Texas Southwestern Medical School at Dallas, will discuss lipid metabolism and vascular complications of diabetes mellitus. Douglas H. Copp, Professor of Physiology at the University of British Columbia Faculty of Medicine, Vancouver, B.C., will report on recent research on parathyroid activity and calcium metabolism. He has recently demonstrated a second parathyroid hormone.

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SURGERY OF COLON AND RECTUM, One Week, March 4
VAGINAL APPROACH TO PELVIC SURGERY, One Week, January 28, March 25
GYNECOLOGY, OFFICE AND OPERATIVE, Two Weeks, April 1
OBSTETRICS, GENERAL AND SURGICAL, Two Weeks, March 11
PROCTOSCOPY AND SIGMOIDOSCOPY, One Week, January 28
VARICOSE VEINS, One Week, January 28
GENERAL SURGERY, One Week, February 25
BOARD OF SURGERY REVIEW, PART II, Two Weeks, March 4
BASIC INTERNAL MEDICINE, Two Weeks, March 4
MANAGEMENT OF COMMON FRACTURES AND DISLOCATIONS, One Week, February 25
BOARD OF INTERNAL MEDICINE REVIEW, PART II, One Week, April 8
GALLBLADDER SURGERY, Three Days, March 11
SURGERY OF HERNIA, Three Days, March 14
CLINICAL COURSES IN FRACTURES, DERMATOLOGY, PEDIATRICS, RADIOLOGY, by appointment
ELECTROCARDIOGRAPHY, One Week, March 18
BASIC PRINCIPLES IN GENERAL SURGERY, Two Weeks, March 18

Information concerning numerous other continuation courses available upon request.

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ACC Convention Open to Nonmembers

An unusually complete program on heart disease has been planned for the 12th Annual Convention of the American College of Cardiology at the Ambassador Hotel, Los Angeles, February 27-March 3. These dates include the Midwinter Symposium of the Los Angeles County Heart Association. Post convention programs will be held at several hospitals in the Los Angeles area, March 4-8. Topics at the convention include, New Concepts and Procedures, Natural History of Cardiac Disease, Uncommon Forms of Heart Disease, Cardiovascular Surgery, Atherosclerosis and Hypertension, Coronary Heart Disease, and The Myocardium. Paul Dudley White will give the convocation address. Nonmembers may register for a $25 fee but interns, residents, research fellows and physicians in uniform will be admitted without fee.

Sears Roebuck—SAMA Preceptor Program

The Sears Roebuck Foundation has enabled a number of small communities to obtain services of a general practitioner by constructing clinic facilities and encouraging young physicians to settle in these towns. This year, for the second time, these physicians will become teachers in a valuable preceptor scholarship plan worked out by the Sears Foundation and the Student American Medical Association. Winners will receive grant of $500 and will serve for two consecutive months with the preceptor. SAMA members who have completed the sophomore year are eligible to apply to the executive director of that organization, 333 North Michigan Avenue, Chicago 1, Illinois.

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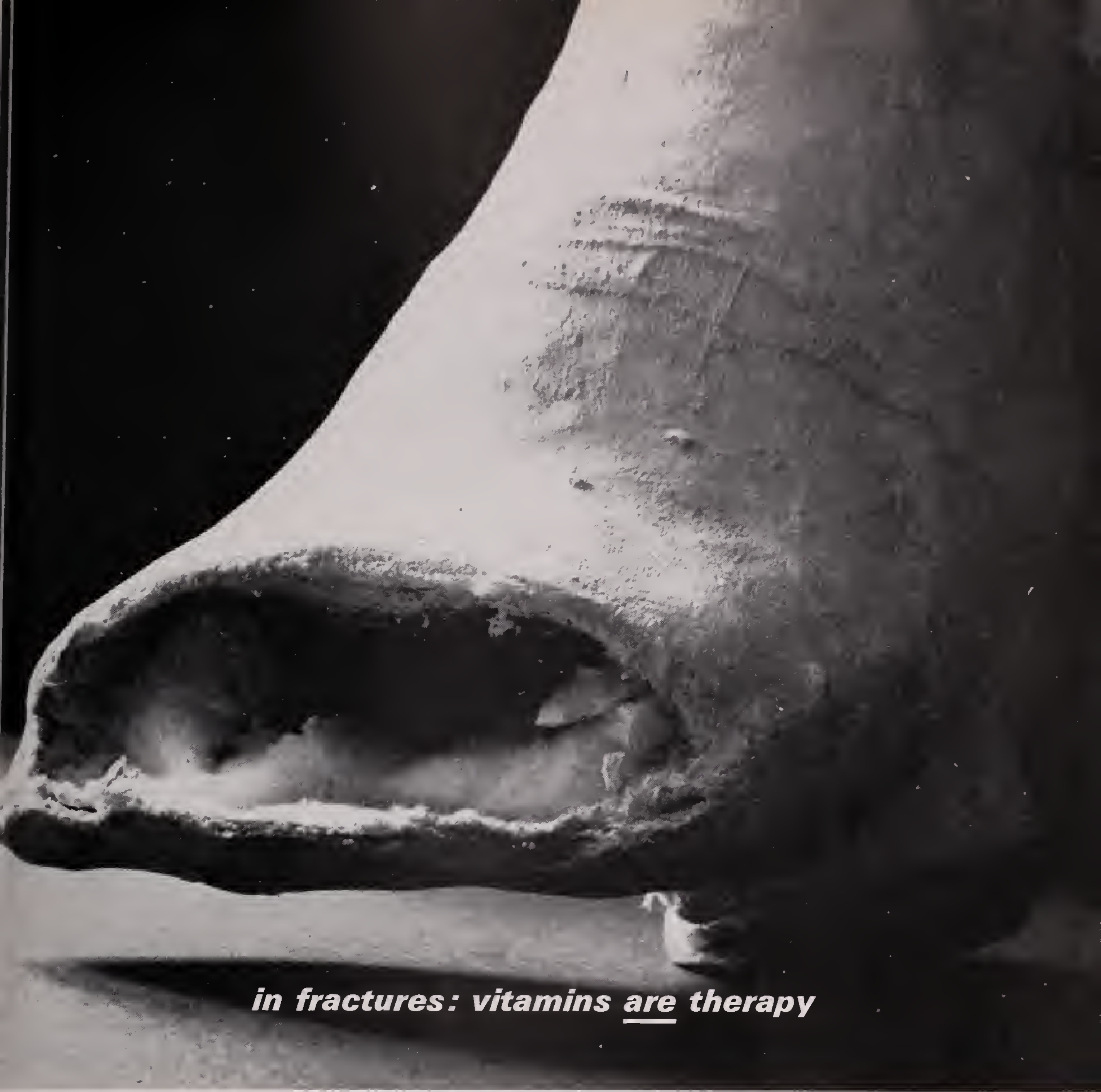

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OFFICIAL PUBLICATION

Washington State Medical Association House of Delegates

First Session, 1:30 P.M., September 16, 1962

September 16-19, 1962, Davenport Hotel, Spokane, Washington

Minutes

Minutes of the 72nd Annual Meeting of the House of Delegates of the Washington State Medical Association, 1961 Session, were presented and APPROVED AS PUBLISHED.

Woman's Auxiliary Report

Mrs. Donald G. Evans, President, Woman's Auxiliary to the Washington State Medical Association, presented the Annual Auxiliary Report to the House of Delegates.

It was moved, seconded and CARRIED that The Woman's Auxiliary Report be ACCEPTED.

Mrs. William G. Thuss, National President, Woman's Auxiliary, was unable to attend first Session. Heyes Peterson, Speaker, House of Delegates, expressed the members' regrets to Mrs. Thuss, and a standing ovation was given Mrs. Evans.

Awards

Willard B. Rew, President, presented the annual A. H. Robins' Community Service Award for 1962 to James A. McFadden of Port Angeles. Dr. McFadden accepted his award, and received the congratulations and a standing ovation from the members of the House.

Announcement of reference committees

The following Reference Committee members were announced by the Speaker:

Necrology Committee: Gilman E. Sanford, Spokane County, *Chairman;* John F. Vaughan, Clark County, Ronald M. Gill, Grant County.

Committee on Resolutions: James W. Haviland, King County, *Chairman;* C. Balcom Moore, Walla Walla County, John A. Nelson, Jr., Cowlitz County.

Committee on Reports of Standing Committees: Douglas P. Buttorff, Pierce County, *Chairman;* Herbert C. Lynch, Yakima County, Charles D. Muller, Kitsap County.

Committee on Reports of Special Committees: Waldo O. Mills, King County, *Chairman*; John L. Hardy, Jr., Whitman County, Robert P. Parker, Spokane County.

Committee on Reports of Special, Special Committees: Donald T. Hall, King County, *Chairman;* G. Marshall Whitacre, Pierce County, Robert C. Coe, King County.

Committee on Place of 1964 Meeting: Robert W. Simpson, King County, *Chairman;* Andrey W. Stevenson, Yakima County, O. Charles Olson, Spokane County.

New business

Proposed amendment to Chapter VIII of the Bylaws, Section 1, standing committees, was presented.

The Speaker referred the proposed amendment, creating a special committee to review activities of the Washington Physicians' Service, to the Reference Committee on Resolutions, along with a special report made to the House of Delegates by the Washington Physicians' Service Liaison Committee.

A. H. Robins Community Service Award
to
James L. McFadden, M.D.
Presentation by Willard B. Rew, President,
Washington State Medical Association

Gentlemen:

The A. H. Robins Company has instituted a Community Service Award to honor the physician in each state judged by his colleagues to have contributed most significantly to civic activities.

The recipient of this Award was selected for this honor by this Association, with the approval of the donor, not only for his professional achievements, but to honor him for his continued loyal and dedicated service to his profession and our country, on a county, state and national level. We are all aware of his many sacrifices in personal time and effort, and the hours of devoted service in behalf of state government as a member of long standing in the House of Representatives, for which we are grateful and appreciative.

Gentlemen, it gives me great pleasure, on behalf of the A. H. Robins Company and the State Medical Association, to present this token of our highest esteem to Dr. James L. McFadden, of Port Angeles, Washington.

Old business

(None)

Communications

(None)

Legislative reports

Dr. McFadden, State Representative from Clallam, Jefferson, and Mason Counties, commented briefly on the results of the last legislative session, and advised he was aware of one bill which failed to pass in the last session, the Good Samaritan bill, which will no doubt be re-introduced this session and in his opinion will have a good chance of becoming law. He emphasized the need for medical representation in both the House and Senate, and the importance of unity by the medical association in legislative matters of concern to the profession.

Report of The Board of Trustees

The Speaker referred the Annual and Supplemental Reports of the Board of Trustees to the Reference Committee on Standing Committees, with the exception of Item 17 of the Annual report; and Item 5 of the Supplemental Report relating to osteopathic matters; and, Item 7 of the Annual Report and Items 2-B and 3 of the Supplemental Report relating to the Report of the Washington Physicians' Service Liaison Committee. These were referred to the Reference Committee on Resolutions.

Reports of AMA Delegates

As in the past, actions of the AMA House of Delegates at its Annual Meetings were divided among the AMA Delegates, for their individual reporting. The following are reports of the actions of the House of Delegates of the American Medical Association's Annual Meetings, November 27, 1961 in Denver; and June 24, 1962 in Chicago:

David W. Gaiser: AMA Board of Trustees. The House approved a report which recommended that the size of the Board of Trustees be increased from 11 members to 15 members. This will be accomplished by adding three elected members and including the immediate past president of the AMA for a one-year term. The House also accepted a recommendation that set the term of office for elected board members at three years and limited the number of terms to three, for a maximum total of nine years service. To implement House action, changes in the Constitution and Bylaws were submitted for consideration at the 1962 Clinical meeting.

As information, Dr. Gaiser said the action of the House in this matter was contrary to the recommendations of the AMA Board of Trustees. He said it was the feeling of the House that 15 men would offer a wider representation throughout the country, and would make possible a quorum present at all meetings of the Board, even though at additional cost.

American Board of Abdominal Surgery. A report from the Council on Medical Education and Hospitals, recommending that recognition should not be granted to the American Board of Abdominal Surgery as a specialty board, was approved by the House. In accepting the report, the House also declared its disapproval, in principle, of establishing specialties which are based largely or wholly on an arbitrarily defined anatomical region of the body. This action concluded that the present contribution of the American Board of Abdominal Surgery to the advancement of surgery and the betterment of public health is inadequate in many important respects. It also concluded that the American Board of Abdominal Surgery does not offer significant potential for the advancement of surgery and the betterment of public health.

M. Shelby Jared: Health Care For the Aged. The House reaffirmed its position of active opposition to the King-Anderson Bill, citing the following reasons: 1. The lack of need for such a plan. 2. That it would provide inadequate care for all aged rather than complete care for those who need help. 3. The fact that inherent in the use of the Social Security mechanism are governmental controls of medical practice which would increase with the expansion of the program. 4. Deterioration of the quality of medical care not only for the aged but for the population as a whole.

In reaffirming strong support for the Kerr-Mills Act, the House declared that "the Kerr-Mills method should be given a fair and reasonable chance to meet the need and thus remove the demand for further Federal legislation."

It urged that in states where existing programs indicate a need for a Kerr-Mills implementing law, each state association should actively sponsor and promote, with other responsible citizens, the enactment of such a law. It also urged the state associtions to "work actively with other responsible citizens in reviewing the functions of the law, evaluating its effectiveness and aggressively supporting improvements in programs to aid those aged who need help so as to achieve the provision of quality medical care and service."

The House took no action on a resolution calling for non-participation in the implementation of the King-Anderson Bill, but urged individual physicians to give particular consideration to Sections 1, 5, and 6 of the Principles of Medical Ethics.

Study of Prepaid Medical Care. The House chided the AMA Board of Trustees and the joint committee appointed to study prepaid medical care at its November meeting for their slowness in reporting, and approved a resolution directing the Board to pursue a more vigorous study and report the results of this study at the June, 1962 meeting. The House

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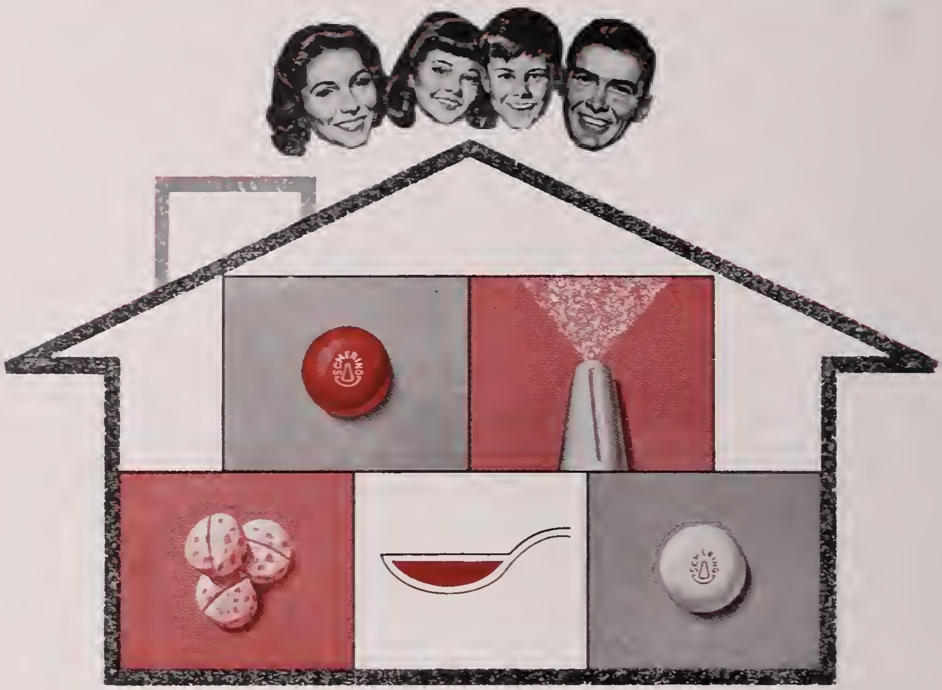

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recognized that each state government has the right to determine its own administrative mechanism. However, it formally approved the administration of indigent medical care programs as a legitimate activity of the state and local health departments, developed in cooperation with the local medical organizations.

At the June, 1962 Meeting, the House approved the following policy statement with regard to voluntary prepayment health insurance protection, and recommended that the Board of Trustees and the Council on Medical Service explore all possibilities, using these principles as a basis:

> **1. The need for application of the prepayment or insurance principle to protect our people against the costs of medical care is fully recognized and applies to all ages rather than to the aged alone.**
>
> **2. Persons financially able to prepay their own expenses are expected to do so, and must be encouraged rather than compelled to do so.**
>
> **3. Persons financially unable to prepay adequately their expenses may properly be assisted to the degree necessary by their families, their communities, their states, and if these fail, by the Federal Government—but only in conjunction with other levels of government.**
>
> **4. The prepayment system should be devoid of governmental controls.**
>
> **5. Dignity and self-sufficiency for the individual should be upheld.**
>
> **6. The protection offered must be reasonably comprehensive rather than token in character.**

National Health Congress. The House approved the continuation of national health congresses on prepaid health insurance, held annually, for the purpose of discussing ways and means of improving prepaid coverage to the public and control by the medical profession.

Dr. Jared reported that according to statistics, there are now 131 million persons covered for prepaid hospital care; 121 million for in-hospital surgical care; and 87 million for both surgical and medical care—an all-time high.

Jess W. Read: Medical Discipline. In the field of medical discipline, the scope of the Judicial Council of the AMA has been expanded. At the Denver meeting, a recommendation giving original jurisdiction to the AMA in disciplining members met with determined opposition, and the matter referred back to the Council on Constitution and By-Laws.

The AMA By-Laws were amended by the House last June to permit the AMA to take disciplinary action against a member when: (1) A state medical association to which a member belongs requests the AMA to take action, or (2) at the request of the AMA a state association to which the member belongs consents to disciplinary proceedings by AMA.

American College of Surgeons. Considerable dissatisfaction with the American College of Surgeons was expressed at the Denver meeting. Comments from ACS on the qualifications of surgeons performing most of the operations in this country in a manner disparaging to general practitioners, headlined the discussions.

This issue overshadowed the primary consideration which was a resolution on the subject of assistants' fees, wherein the AMA House of Delegates, in 1961, approved the principle that a surgeon may pay an assistant whether or not the assistant is the referring doctor. The essence of disagreement with ACS was when a surgical assistant is the referring doctor, and is paid for his assistance by the surgeon. There is a difference of opinion on this point.

In the Chicago meeting, the House considered the basic issue of policy concerned with surgical assistants and fee splitting. It declared that the adoption and interpretation of the Principles of Medical Ethics is the prerogative and duty of the AMA. It instructed its Board of Trustees to investigate and handle inaccurate or misinterpreted public statements regarding medical ethics. In an effort to take a closer look at its policy, it restated the five principles to emphasize that in most circumstances, when services are rendered by more than one physician, each should bill the patient and be paid separately. Opinions were expressed indicating that the general practitioner group and particularly the surgeons, felt that the circumstances under which a surgeon may pay his assistant should be restricted by definition as well as by emphasis.

Amalgamation of osteopaths. The problem of the amalgamation of osteopaths and doctors of medicine in the State of Washington was presented at a meeting of the Council on Medical Education and Hospitals, and the question posed as to how the State of Washington could apply AMA policy where there is no medical school in Washington to evaluate the individual osteopath as to whether he in fact practices on a scientific basis, and upon proper qualification, to grant an M.D. degree.

The Council appreciated the problem and offered several suggestions. This matter will be discussed in detail at our reference committee hearings on osteopathy, Dr. Read said.

Frederick A. Tucker: Council on Medical Education and Hospitals. "For years the AMA has agitated for more interest and activity at the grass roots," Dr. Tucker said. "I feel that the tenor of the past two meetings indicates that the grass roots, although not in a complete uprising, is beginning to feel its power and is demanding changes in the governing bodies of the AMA."

This was manifest in three separate resolutions dealing with reconstitution of the Council on Medical Education and Hospitals. The House: 1. Disapproved a suggestion that the Council on Medical Education and Hospitals be replaced by two separate councils on undergraduate and graduate medical education, 2. Referred to the Board of Trustees, a proposal that at least six members of the Council on Medical Education and Hospitals shall be engaged primarily in the private practice of medicine in hospitals without a medical school affiliation and that no more than four members may be salaried personnel of a medical school or university, 3. Recommended that the Council on Medical Education and Hospitals conduct a study of specialty residencies.

Three resolutions relating to the redistribution of interns were referred to the Council on Medical Education and Hospitals for further study: 1. A resolution re greater utilization of the community hospital in teaching programs, and a closer relationship between the University hospital and the community hospital. 2. A resolution re the great numbers of residents and bulk of the interns in the teaching hospitals should eliminate or greatly reduce the number of interns to the community hospitals. This would, in turn, increase the numbers going to general practice and give the interns going to the teaching hospitals for their residencies a better knowledge of the private patient.* 3. A resolution re elimination of the term intern and the term assistant residents and residents to be used. The thought behind this was to increase the hospital salaries and thus make medicine more appealing to college graduates.

Secretary-Treasurer's report

Wilbur E. Watson read the Secretary-Treasurer's Report, which was APPROVED.

Finance Committee report

V. W. Spickard reviewed the Finance Committee report wherein the necessity for the proposed increase in annual dues from $45.00 to $60.00 was given consideration.

The Speaker referred the Finance Committee report to the Reference Committee on Resolutions, in conjunction with the proposed Amendment to Chapter II, Section 3, Dues.

Legal Counsel's report

Mr. Henry E. Kastner submitted the Legal Counsel Report which was FILED FOR REFERENCE.

(Note: The above reports in full are available at the Central Office to any WSMA member.)

Reports of standing committees

The Speaker referred all Annual Reports of standing committees to the reference Committee on Standing Reports, with the exception of Items 22, 52, 53, 54, 62, 67, 68, and 69 of the published report; and, Items 1 and 16 of the supplemental report of the Executive Committee, relating to the subject of osteopathy. These items were referred to the Reference Committee on Special, Special Committee Reports.

Reports of special committees

The Speaker referred all Annual Reports of Special Committees to the Reference Committee on Special Committee Reports.

Resolutions

The Speaker referred all proposed amendments to the By-Laws, and those resolutions published in the House of Delegates Book, or accepted by the House for consideration at this time, to the Reference Committee on Resolutions. All material and reports relating to the WPS Liaison Committee were referred to the Committee on Resolutions.

Adjournment

The First Session of the House of Delegates was adjourned at 3:15 P.M.

Second Session, 1:30 P.M., September 19, 1962

Roll call

Upon calling the roll, a quorum was found to be present. Also present were: David W. Gaiser, AMA Delegate; M. Shelby Jared, AMA Delegate; Jess W. Read, AMA Delegate; Frederick A. Tucker, AMA Delegate; V. W. Spickard, Chairman, Finance Committee; Donald T. Hall, Chairman, Medical Defense Committee; Mr. Ralph W. Neill, Executive Secretary, WSMA; Mr. Richard F. Gorman, Public Relations Director; Mr. Harlan Knudson, Public Relations Director; Mr. Henry E. Kastner, Legal Counsel; Mrs. Carol McPhillips, Secretary.

Necrology Committee report

Gilman E. Sanford, Chairman, presented the Necrology Report: The Lord in His infinite wisdom, and ways that passeth all understanding, has called from among us thirty-five members since our last Annual Meeting. Some of these physicians were privileged to practice our profession only a short time, others were with us many years, passing in their eighties and nineties. To their families, we express our deepest sympathy, and thanks for the privilege of having known each of them.

A moment of silence was observed in memory of the many friends and colleagues who have departed this past year.

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* Dr. Tucker's report pertains to two resolutions presented at Chicago, one from New Jersey and one from California. Both decried the overstaffing of teaching hospitals while many excellent community hospitals lack interns and residents. The substitute resolution, written by the reference committee, stated that it is "imperative that medical education be productive of more doctors oriented toward general practice." Ed.

The Necrology Report was ACCEPTED.

Report of the Reference Committee on Annual Reports of Standing Committees

Douglass P. Buttorff presented the report of the Reference Committee on Annual Reports of Standing Committees. Each annual report and its referenee committee recommendations was considered by the House, and the report was ADOPTED with the following respective actions:

Board of Trustees
The Published and Supplemental Reports of the Board of Trustees were ADOPTED AS AMENDED with the exception of the items relating to Osteopathy which had been referred to the Reference Committee on Special, Special Committee Reports.

The Published Report was amended in Section 7, paragraph 2, line 2, by adding the words, *or past members* after the word, *member.*

The Supplemental Report was amended in paragraph 4, line 4, after the word, *Delegates* by adding the words, *with the following recommendations* and adding the following subparagraphs, to read:

> **A. The Washington State Medical Association basically disapproves the appropriation of Hill-Burton Funds to implement diagnostic and treatment centers for any private medical group per se, such as occurred in allocating funds to Group Health Corp. in the amount of approximately $400,000, recently.**
>
> **B. The House of Delegates censures the Washington State Hospital and Medical Facilities Council and in particular the medical representatives on this committee who voted in favor of this allocation.**
>
> **C. That a committee consisting of the AMA Delegates meet to: (1) Prevent further similar allocations on both a local and national basis. (2) To pursue all possible resources to nullify this allocation to Group Health and report back to the Board of Trustees within six weeks.**
>
> **D. The House of Delegates feels that this action in allocating Hill-Burton Funds to private medical groups is extremely dangerous in its implications.**

The Supplemental Report was amended by deleting paragraph 6, and substituting the following paragraph:

> **6. Approved a suggestion by Frederick A. Tucker, AMA Delegate, that: Starting next year, 1963, the senior AMA Delegate, in conjunction with the other AMA Delegates, compile an annual report of all AMA actions of interest to this Association, to be printed in the House of Delegates Book.**

Executive Committee
The published report of the Executive Committee was ADOPTED AS AMENDED, with the exception of items relating to osteopathy referred to the Reference Committee on Special, Special Committee Reports; and the supplemental report of the Executive Committee was FILED.

The published report was amended in paragraph 76-A, line 1, after 1962 by deleting the words *Democratic platform* and substituting the words, *major party platforms.*

Graduate Medical Education
The report of the Committee on Graduate Medical Education was FILED.

Grievance
The report of the Grievance Committee was ADOPTED AS AMENDED. The Report was amended by deleting paragraph 6-E in its entirety.

Industrial Insurance
The Report of the Industrial Insurance Committee was ADOPTED AS AMENDED.

The Report was amended by deleting sub-paragraphs A. B, C, and D of paragraph 4, for the following reasons: (A) Matter already being taken care of by Special Committee on Relative Value Fee Study; (B) There is already a mechanism set up by referral to the local or state grievance committee; (C) Outside the scope of the medical society; and, (D) Would take a change by Legislature, and at present, there is no method or authority for the creation of such a group. It is the job of this committee to arrive at these through existing mechanisms and the appointment of another committee or board adds nothing to the solution of the problem.

Medical Defense Fund
The Report of the Medical Defense Fund Committee was FILED WITH COMMENDATION.

Medical Economics
The Report of the Medical Economics Committee was FILED.

Medical School Teaching and Research Hospital
The Report on the Medical School, Teaching and Research Hospital Committee was FILED.

Mental Health
The Report of the Mental Health Committee was ADOPTED AS AMENDED.

The Report was amended in paragraph 4-D, line 2, after the word, *health* by adding *of the Department of Institutions;* and in line 3, by deleting the word, *Mental.*

Neoplastic
The Report of the Neoplastic Committee was FILED WITH COMMENDATION.

Occupational Health
The Report of the Occupational Health Committee was FILED.

Professional and Hospital Relations
The Report of the Professional and Hospital Relations Committee was ADOPTED AS AMENDED.

The Report was amended as follows: by deleting paragraphs 2-A, B, and C in their entirety.

In paragraph 3-B, line 6, following the word *well* deleting the remainder of the paragraph.

In paragraph 4-A, following the word *program* deleting the remainder of the sentence.

In paragraph 4-B, following the word *hospitals* deleting the remainder of the sentence.

In paragraph 4-D, inserting the words *Methods of* before the word *hospital* and, after the word *appointments* deleting the remainder of the sentence. Deleting paragraph 4-E in its entirety.

Publication

The Report of the Publication Committee was ADOPTED AS AMENDED.

The Report was amended by deleting paragraphs 6, 7, 8, and 9 in their entirety, and substituting the following two paragraphs:

> **6. Progress toward improvement in the financial and personal problems above has been made. More strict economic measures have been introduced, and relationships between the Editor and Board of Trustees have improved.**
>
> **7. The financial condition of Northwest Medicine depends to a major degree on the income derived from pharmaceutical advertising. Until such time as the government firmly establishes the regulatory pattern on industry which it proposes, the advertising income will be variable and the financial status of Northwest Medicine unpredictable. Financial reserve at the present is such that Northwest Medicine can operate at its present deficit rate for a number of years.**

Public Laws

The Report of the Public Laws Committee was ADOPTED AS AMENDED.

The Report was amended by deleting paragraphs 3, 4, 5, 6, and 7, for the reason the subject matter in each had been referred to other Reference Committees for action.

In paragraph 9, line 3, following the word *nurses* by deleting the remainder of the paragraph.

In paragraph 9, subparagraph 2, line 3, by adding a period following the word *indefinitely* and deleting the remainder of the sentence.

Public Relations

The Report of the Public Relations Committee was FILED WITH COMMENDATION.

Scientific Work

The Report of the Scientific Work Committee was FILED WITH COMMENDATION.

State Department of Health (Advisory)

The Report of the State Department of Health (Advisory) Committee was ADOPTED AS AMENDED.

The Report was amended by deleting paragraphs 5-A, B, C, D, E, and F for the reason that the reference committee did not understand the reasoning behind the recommendations, and there was no one present who could clarify their meanings.

RECOMMENDATION of Reference Committee:

> **That in the future, the Chairman, or an informed representative of the Committee whose report is under consideration by the Reference Committee, be present at the hearings.**

Report of the Reference Committee on Annual Reports of Special Committees

Waldo O. Mills, Chairman, presented the Report of the Reference Committee on Annual Reports of Special Committees. Each Annual Report and its Reference Committee recommendations was considered by the House, and the Report was adopted with the following respective actions:

Aging Population

The Report of the Aging Population Committee was ADOPTED AS AMENDED.

The Report was amended by the addition of subparagraph 2, under paragraph 2-A, to read:

> **We urge that the Washington State Medical Association endorse the enactment of enabling legislation permitting insurance programs similar to the Connecticut 65 Plan.**

Basic Science

The Report of the Basic Science Committee was FILED.

Civil Disaster

The Report of the Civil Disaster Committee was ADOPTED AS AMENDED.

The Report was amended by adding to paragraph 11-B the sentence,

> **If at all possible, these training courses be held in other areas such as Eastern Washington.**

Ionizing Radiation Hazard Control

The Report of the Ionizing Radiation Control Committee was ADOPTED AS AMENDED.

The Report was amended by the addition of paragraph 4, to read:

> **We recommend the function of this committee be transferred to the State Department of Health Advisory Committee, and suitable personnel be appointed to carry out this duty.**

Maternal and Child Welfare

The Report of the Maternal and Child Welfare Committee was ADOPTED WITH COMMENDATION.

Medical Education Campaign Fund

The Report of the Medical Education Campaign Fund was ADOPTED WITH COMMENDATION.

Rehabilitation Programs

The Report of the Rehabilitation Programs Committee was FILED WITH COMMENDATION, with the recommendation that:

> **The specific advice rendered to the Division of Vocational Rehabilitation be made available to the Executive Committee, and Board of Trustees of the State Association.**

Relative Value Fee Study

The Report of the Relative Value Fee Study Committee was ADOPTED.

Revision of Constitution and Bylaws

The Report of the Revision of Constitution and By-Laws Committee was FILED.

Rural Health

The Report of the Rural Health Committee was ADOPTED.

School Health

The Report of the School Health Committee was ADOPTED AS AMENDED.

The Report was amended by deleting paragraph 3-A and substituting the following paragraph:

> **A joint committee on the Appraisal of the Health of the School Child be formed, comprised of representatives of the school administration, lay groups, and the medical profession.**

Staphylococcal

The Report of the Staphylococcal Committee was FILED with the recommendation that the committee be discharged.

State Department of Public Assistance (Advisory)

The Report of the State Department of Public Assistance (Advisory) Committee was FILED, with the recommendation that next year's committee be instructed to hold at least one meeting with the Department of Public Assistance and explore all mutual problems.

Veterans Medical Care

The Report of the Veterans Medical Care Committee was FILED, with the recommendation that the committee be discontinued.

WSMA Special Convention

The Report of the WSMA Special Convention Committee was ADOPTED.

Report of the Reference Committee on Resolutions

James W. Haviland, Chairman, presented the Report of the Reference Committee on Resolutions. Each Resolution and Proposed Amendment to the By-Laws was considered by the House, and the Report ADOPTED, with the following respective actions:

Amendment to the Bylaws, Chapter II, Section 3, Members—Rights and Duties

The Proposed Amendment to Chapter II, Section 3, (Dues) of the By-Laws was ADOPTED, and now reads:

> **Section 3. Dues. The annual dues of active members shall be $60.00 per year, and shall be payable on or before January 1 of each year. Said dues shall be paid to the treasurer of the member's component society, who shall by the tenth of each month forward to the Secretary-Treasurer of this Association the dues collected from the members during the preceding month.**

The Speaker ruled out of order a motion by Dr. Stevenson, Yakima County, that the dues be increased to $100 for the next three years, on the grounds that such recommendation was not properly submitted in writing twenty-four hours in advance of the second session.

Amendment to the Bylaws, Chapter IX, Section 5, Sections

The Proposed Amendment to Chapter IX, Section 5, (Sections) was REJECTED on the grounds that it is an incomplete action since it would require a concomitant amendment of Article VI of the WSMA Constitution.

Amendment to the Bylaws, Chapter VIII, Standing Committees

The Proposed Amendment to Chapter VIII, Standing Committees, was ADOPTED AS AMENDED.

The Amendment, as amended, will change the numbering of Section 1 (Standing Committees) by inserting as Item 13, *Prepaid Medical Care* and renumbering Items 13-18 to *Items 14-19*, respectively; and Section 16, under Standing Committees, as amended, now reads:

> **Section 16. Prepaid Medical Care. ** The Committee on Prepaid Medical Care shall consist of nine (9) members elected by the Board of Trustees; not more than four (4) members to be members or past members of the Washington Physicians Service Board of Trustees. At the first meeting of the WSMA Board of Trustees following the Annual Meeting, the four members with present or past membership on the Washington Physicians Service Board of Trustees shall be elected for a one-year term. The other five members shall be elected as follows: In 1962, one member shall be elected for a one-year term; two shall be elected for two-year terms; two shall be elected for three-year terms, thereafter one or two shall be elected for three-year terms, as such vacancies occur. PURPOSE of the Committee shall be to assess and report the problems and successes of the Doctor-Sponored or Doctor-Administered Medical Care Plans in the state of Washington as they pertain to presently accepted philosophy and to recommend future changes and requirements.**

Washington Physicians Service Liaison Report

The progress Report to the WSMA Board of Trustees and House of Delegates from Quin B. DeMarsh, Chairman of the Washington Physicians Service Liaison Committee was ADOPTED.

Resolution—Statement of Principles, Assistants' Fees

The Resolution on Statement of Principles—Assistants' Fees was ADOPTED AS AMENDED, and now reads:

> **WHEREAS, it is necessary for the House of Delegates of the American Medical Association periodically to re-affirm ethical principles concerning the practice of medicine; and**
>
> **WHEREAS, changing methods of payment for medical care occasionally make clarification and amplification of basic principles necessary, now therefore**
>
> **BE IT RESOLVED, that the Washington State Medical Association re-affirm the ideas expressed by the House of Delegates in New York in 1961 relative to assistants' fees, but suggest amplification as herein written:**

**Alphabetical listing of committee names and the sections do not follow the same numerical sequence. Ed.

1. Each member of the AMA is expected to observe the principles of Medical Ethics in every aspect of his professional practice. 2. Each doctor engaged in the care of the patient is entitled to compensation commensurate with the value of the services he has personally rendered. 3. No doctor should bill or be paid for a service which he does not perform; mere referral does not constitute a professional service for which a professional charge should be made or for which a fee may be ethically paid or received. 4. When services are rendered by more than one physician, each physician should submit his own bill to the patient and be compensated separately whenever possible. 5. It is ethically permissible in certain circumstances, however, for a surgeon to engage other physicians to assist him in the performance of a surgical procedure and to pay a reasonable amount for such assistance, provided the details of the financial transaction are made known to the patient. This principle applies whether or not an assisting physician is the referring doctor, and be it further

RESOLVED, that the House of Delegates of the American Medical Association urgently and respectfully ask that the AMA add this modification to the statement of principles regarding assistants' fees which was adopted in New York in 1961.

Resolution—Basic Science Examination

The resolution on Basic Science Examination was ADOPTED, and reads:

RESOLVED, that the examinations in the basic sciences now required by the law of the State of Washington, be re-evaluated by the Washington State Medical Association, and that this opinion and recommendation be forwarded to the Board of Medical Examiners of the State of Washington.

Resolution—Board of Medical Examiners

The resolution on Board of Medical Examiners was ADOPTED AS AMENDED, and now reads:

BE IT RESOLVED, that the Washington State Medical Association study the formation of an independent Board of Medical Examiners for the State of Washington, separate from the Department of Licenses of the State Government, and report back to the House of Delegates.†

Resolution—Corporate Practice, Professional

The resolution on Corporate Practice—Professional was ADOPTED AS AMENDED, and now reads: (Note: The original title was amended also and now reads: Amendments to the Laws of Partnership, etc., Practice)

WHEREAS, the tax laws of the United States provide preferential incentives and advantages to corporation employees in the establishment and building of retirement funds; and

WHEREAS, the laws of the State of Washington do not presently permit self-employed professional people the privilege of establishing similar retirement funds outside of their current taxable income, now therefore

BE IT RESOLVED, that the Washington State Medical Association study possible amendments to the laws of partnership and associations outside of partnership, which will secure for self-employed professional people the same tax deferment upon retirement funds now enjoyed by the employees of corporation.

Resolution—Professional Corporations

The resolution on Professional Corporations was ADOPTED AS AMENDED, and now reads: (Note: As amended, the present title is changed to Professional Associations)

WHEREAS, a Federal tax inequity exists against self-employed persons; and

WHEREAS, an enabling act permitting the formation of professional associations may be proposed to the next session of Legislature of the State of Washington; and

WHEREAS, to preserve the professional ethics of physicians and surgeons of the State of Washington, such an Act must provide that such medical associations to be formed under provisions of the Act are owned, managed, and controlled exclusively by licensed physicians, and that there is no interference in the traditional physician-patient relationship; now therefore

BE IT RESOLVED, that the House of Delegates of the Washington State Medical Association endorse the resolution adopted by the House of Delegates of the American Medical Association on December 5, 1957, which follows:

WHEREAS, it has been found by experience that physicians practicing as a partnership, association, or as members of other lawful group arrangements can preserve the physician-patient relationship, insuring that medical responsibility lies in the hands of the patient's own doctor and not in the hands of an unlicensed person or entity; and

WHEREAS, the ethical principles of the AMA apply to the individual physician whether he practices alone or with a group, now therefore

BE IT RESOLVED, that the House of Delegates affirm that it is within the limits of ethical propriety for physicians to join together as partnerships, associations or other lawful groups, provided that the ownership and management of the affairs thereof remains in the hands of licensed physicians.

Resolution—Good Samaritan Act

The resolution on "Good Samaritan Act" was ADOPTED AS AMENDED, and now reads:

BE IT RESOLVED, that the Washington State Medical Association work for the enactment of a Good Samaritan Act in the Washington State Legislature in the 1963 Session.

Resolution—Kerr-Mills Bill Implementation

The resolution on Kerr-Mills Bill Implementation was ADOPTED AS AMENDED and now reads:

WHEREAS, it was the intention of the Congress of the United States in passing the Kerr-Mills Act, that the funds should be used to expand the current medical care of the aged programs of the various states; and

WHEREAS, the Kerr-Mills matching funds of approximately $8,000,000 for this 1961-1963 biennium are currently being placed in the General Fund of the State of Washington and used to reduce expenditures of state tax monies; and

WHEREAS, no additional funds have been added to the health care division of the Public Assistance Programs, and consequently there has been no improvement in the state's pro-

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†The study will be conducted by a committee appointed by the President. Ed.

gram for care of the aged as intended by the Congress of the United States, now therefore

BE IT RESOLVED, that the Washington State Medical Association recommend that the Washington State Legislature in its next Session take the necessary legislative steps to insure that our state will use Federal Kerr-Mills fund grants to improve the health care of our senior citizens rather than to merely maintain old standards and permit reduction in state appropriations.

Resolution—Standards of Safety for Compressed Air Work

The resolution on Standards of Safety for Compressed Air Work was ADOPTED, and reads:

> **WHEREAS, safety standards for hours of labor and decompression times are primarily a physiological problem, and**
>
> **WHEREAS, Washington State Public Laws RCW #49.24.050, Chapter 131, Section 5, Laws of 1937; and RCW #49.24.090, Chapter 194, Section 2, Laws of 1941 rigidly define hours of labor and decompression times, and**
>
> **WHEREAS, public law per se should not specifically delineate safe practices and principles of prevention of occupational disease, which might be subject to change due to scientific knowledge and experience, therefore**
>
> **BE IT RESOLVED, that the Washington State Medical Association favors repeal of Public Laws RCW #49.24.050, and RCW #49.24.090, as applied to standards of safety for compressed air work, and be it further**
>
> **RESOLVED, that the Washington State Medical Association favors adoption of Standards of Safety for Compressed Air Work as proposed by medical authorities in this field, and approved by the Department of Labor and Industries following public hearing in accordance with state law in Olympia, August 1, 1962.**

Report of the Reference Committee on Special, Special Committee Reports

Donald T. Hall presented the Report of the Reference Committee on Special, Special Committee Reports which considered only those matters relating to the osteopathic problem as it now stands in the State of Washington.

Dr. Hall pointed out that after several hours of discussion there was no opposition expressed to the proposed principle of amalgamation, and in consideration of the commitments made by those osteopaths who are favorable toward this proposal, and because of the organizational suicide which they have already committed in order to continue negotiations with us, the Committee recommends approval of the principle of amalgamation since such approval is a vote of confidence which permits further negotiation.

Dr. Hall also called the attention of the House of Delegates to the following points: 1. That the agreement of Proposed Merger is a permissive document designed to allow further negotiation. 2. That only those osteopaths meeting the requirements to practice medicine and surgery in the State of Washington will be considered. 3. The proposed Amendment to the Constitution, according to our By-Laws, must rest for one year before definitive action is taken by the 1963 House of Delegates, thus allowing this year for further informative material and progress reports to be provided to the county medical societies in order that all members of the Association be informed as to the purposes, rationale, and details of the proposed principles of merger. 4. The Committee believes also, that such amalgamation will result in a higher standard of medical care in that it will enable a more uniform use of available facilities; a wider exchange of professional experiences and knowledge; and, a sharing of the best elements of both professions. 5. That the mechanics of its implementation will require step by step procedures to be worked out in the future.

Each Item relating to osteopathy was considered by the House, and the report was ADOPTED.

Proposed Amendment to Constitution, Article IV, Section 3 (b), Component Societies

The Proposed Amendment to Article IV, Section 3(b), issuance of Charters, of the Constitution of the Washington State Medical Association was APPROVED. (The Proposed Amendment, in accordance with the BY-LAWS, must be published twice during the year in Northwest Medicine, and referred back to the 1963 House of Delegates for final action.)

The Proposed Amendment reads:

> **Section 3. Issuance of Charters. (b). After the issuance of the charters provided for immediately above, the Board of Trustees, with the approval of the House of Delegates, may charter as a component society a medical representative of the medical profession of a county as circumstances may dictate or as seems desirable. No charter shall be issued with respect to a county in which a component society previously chartered has territorial jurisdiction; provided, however, the Board of Trustees may create a state-wide component society on an interim basis only to implement the merger of the Washington State Osteopathic Association into the Washington State Medical Association; provided, further, that whenever an increase in membership warrants, an additional component society may be chartered within the previous territorial jurisdiction of an existing component society composed of two or more counties.**

Board of Trustees

Paragraph 17 of the published Board of Trustees Report, dated May 20, 1962, was FILED.

Paragraph 5 of the supplemental Board of Trustees Report was APPROVED.

Executive Committee

The items referred from the published report of the Executive Committee was FILED.

Item 1 of the supplemental report of the Executive Committee, dated August 15, 1962, was FILED WITH COMMENDATION.

Progress Report on Study of Osteopathic Problem

The Progress Report Re Study of the Osteopathic Problem submitted to the Executive Committee and the Board of Trustees, was FILED AS AMENDED.

The Report is amended in paragraph 2, line 2, by deleting the word, *all*, following the word, *wherein*.

Resolution—Osteopathy

The resolution on osteopathy was ADOPTED AS AMENDED, and now reads:

> **WHEREAS, an "Agreement of Proposed Merger" between the Executive Committee of the Washington State Medical Association and the Washington State Osteopathic Association has been made, and**
>
> **WHEREAS, the Board of Trustees has approved the action of its Executive Committee in this area; and**
>
> **WHEREAS, this Agreement was made and entered into for the primary purpose of improving the health services available to the citizens of the State of Washington; and**
>
> **WHEREAS, this objective is to be accomplished by way of amalgamating the Washington State Osteopathic Association into the Washington State Medical Association consonant with the desires of the individual member physicians; and**
>
> **WHEREAS, the "Agreement of Proposed Merger" provides that individual members of the Washington State Osteopathic Association will apply for a degree of Doctor of Medicine issued by a medical school approved by the Council on Medical Education and Hospitals of the American Medical Association, and the Association of American Medical Colleges; now therefore**
>
> **BE IT RESOLVED, that the House of Delegates of the Washington State Medical Association approve, confirm and ratify the "Agreement of Proposed Merger" executed by the Executive Committee of the Washington State Medical Association and the Board of Trustees of the Washington State Osteopathic Association on the 4th day of June, 1962; and be it further**
>
> **RESOLVED, that the Board of Trustees be and is hereby instructed to take all proper measures to implement, facilitate, and expedite this merger program.**

The House of Delegates commended E. Harold Laws, Chairman of the Special Osteopathy Committee, and his committee members, Jess W. Read, Frederick A. Tucker, and Wayne Zimmerman for the tremendous amount of work and personal effort involved in the osteopathy reports, and gave the members a standing ovation.

Report of Reference Committee on Place of 1964 Meeting

Robert W. Simpson, Chairman, presented the Report of the Reference Committee on Place of 1964 Meeting.

The House of Delegates approved the recommendation of the Committee that the 1964 Annual Meeting be held in Seattle, Washington, along with the recommendation that if it should be necessary within the next year or two to hold an interim meeting, consideration be given to Yakima, Washington.

Report of the Nominating Committee

The Report of the Nominating Committee was forwarded to the members of the House of Delegates within the required 20 days prior to the Second Session of this House.

The Speaker declared additional nominations open from the floor; and when necessary, called for a written ballot. Election results are as follows:

President-Elect
Robert B. Hunter, Sedro Woolley
Vice President
Robert P. Parker, Spokane
Assistant Secretary-Treasurer
Carl E. Mudge, Seattle
Speaker of the House
Heyes Peterson, Vancouver
Finance Committee
Vernon W. Spickard, Seattle
AMA Delegate
M. Shelby Jared, Seattle
AMA Alternate
Dean K. Crystal, Seattle
AMA Delegate
Jess W. Read, Tacoma
AMA Alternate
I. C. Munger, Jr., Vancouver
Elected Trustees, (Two-year-term—Eastern District)
Peter T. Brooks, Walla Walla
Clarence L. Lyon, Spokane
Elected Trustees, (Two-year-term—Western District)
J. W. Bowen, Tacoma
William E. Watts, Seattle
John Hahn, Arlington, (to serve Dr. Hunter's unexpired term—1963.)
Elected Trustees—At Large, (One-year-term)
Francis M. Brink, Spokane
Frederick L. Burrows, Yakima
G. Marshall Whitacre, Tacoma
Duncan Robertson, Seattle
John A. Nelson, Jr., Longview
Joseph Greenwell, Pasco

Old business or new business

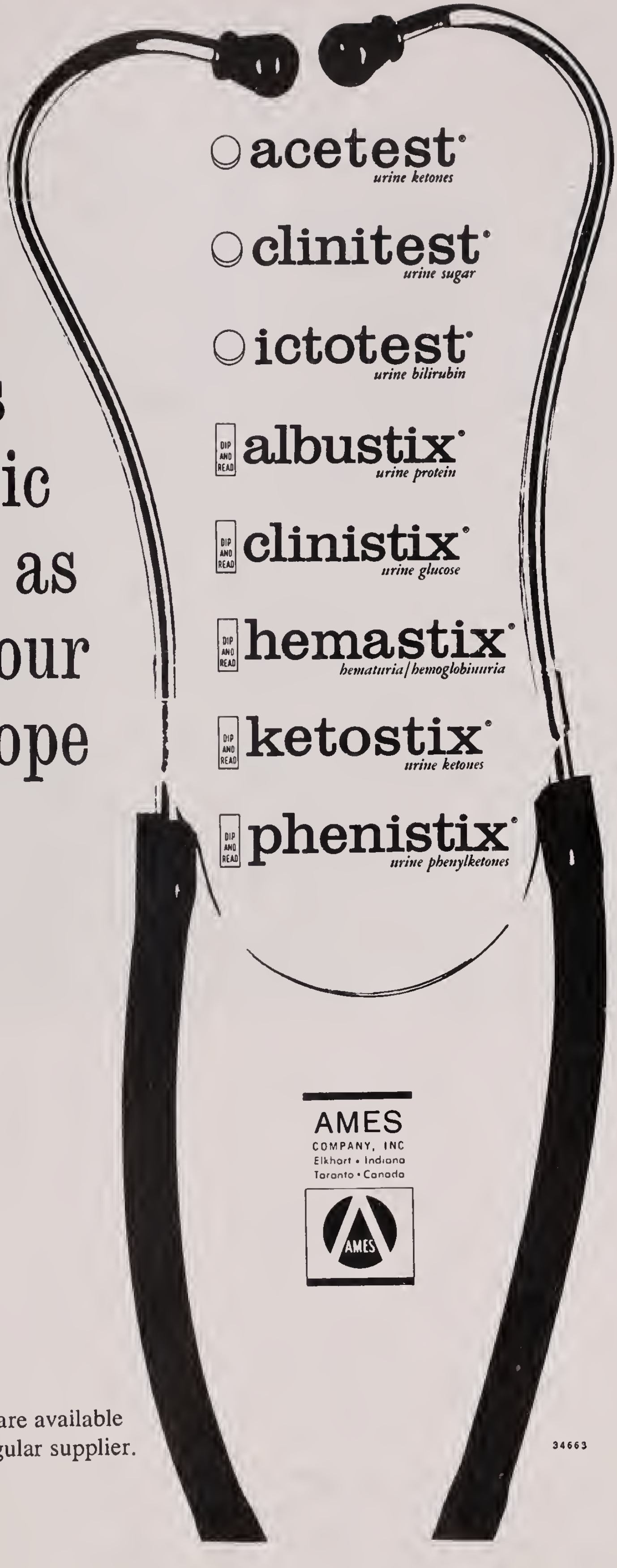
There was no Old Business or New Business presented to the House of Delegates.

Induction of new President

Dean K. Crystal, President-Elect, was escorted to the rostrum, and was administered the Presidential Oath of Office by the Speaker.

Willard B. Rew, retiring President, presented to Dr. Crystal the gavel as a symbol of his authority as President, and assured him of, "my sincerest wishes for a happy, successful, and fruitful administration, and my cooperation throughout the year."

Dr. Crystal expressed his appreciation for the honor bestowed upon him, and as his first official duty, on behalf of himself and the entire membership in recognition and gratitude for a job well done, presented Dr. Rew with an inscribed gavel and plaque with, "our sincere thanks."



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your
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○ **ictotest**®
urine bilirubin

DIP AND READ **albustix**®
urine protein

DIP AND READ **clinistix**®
urine glucose

DIP AND READ **hemastix**®
hematuria/hemoglobinuria

DIP AND READ **ketostix**®
urine ketones

DIP AND READ **phenistix**®
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And even these were the fortunate ones, despite the fact that they were to carry a disfigurement for life. Many died. Particularly if meningitis had set in before surgery . . .

You see very few mastoid scars around today – and, under 20 years of age, they are almost nonexistent.

But, not so many years ago (1934) it was a different story:

*"No case of acute mastoiditis should be accepted for insurance unless the ear has healed up after operation and has remained so for at least six months."**

From insurance risk to a practically unknown entity in medicine is quite a record for the relatively few intervening years between then and now. The reasons are not hard to come by. Diagnostic techniques have improved enormously, as has the quality of medical education. And, we submit, so has the quality of the medicines which have become available.

Yet, the value of independent drug research has been seriously challenged – research which has produced the chemotherapeutic compounds which make the *cure* of mastoiditis practically a routine, not even a worrisome, procedure. True, the cost may run as high as $15.00. Yet, ask the man who paid $1,000.00 for his mastoid scar which he would have preferred – if he had had the choice.

*Asherson, N., "Acute Otitis and Mastoiditis in General Practice," H. K. Lewis & Co., Ltd., London, 1934.

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PRESIDENT	*Manley Shaw, M.D., Boise*
SECRETARY	*A. Curtis Jones, M.D., Boise*
EXECUTIVE SECRETARY	*Mr. A. L. Bird, Boise*

annual meeting June 23-27, 1963, Sun Valley

South Idaho Board Meets

The first official meeting of the Board of Directors of the South Idaho Medical Service Bureau, Inc., since the Articles of Incorporation and other documents were officially filed with the State was held at the Owyhee Hotel, Boise, Dec. 7.

Physician members of the Board of Directors are Joseph M. Thomas, William D. Forney, A. Curtis Jones, Manley B. Shaw, and Quentin W. Mack, all of Boise; S. D. Simpson, Caldwell; Russell Tigert, Jr., Soda Springs; Reuben C. Matson, Jerome; Fred E. Wallber, Idaho Falls; Dean H. Mahoney, Burley; O. D. Hoffman, Rexburg; Lloyd S. Call and Corwin E. Groom, Pocatello.

Board of Health Advisory Committee

The Board of Health Advisory Committee of the association met with officers of the State Department of Public Health December 8, at the Owyhee Hotel, Boise. James R. Kircher, Burley, is chairman. Other members: R. George Wolff, Homedale; J. Gordon Daines, Boise; Bernard L. Kreilkamp, Twin Falls, and Wilbur C. Hayden, Sandpoint.

Mental Health Committee

The Mental Health Advisory Committee of the association met December 8 at the Owyhee Hotel, Boise. Dale D. Cornell, Boise, is chairman. Other members: F. Wayne Schow, Twin Falls; Donald M. Gumprecht, Coeur d'Alene; Robert M. Frazier, Boise, and Jay P. Merkley, Pocatello.

AMA meeting attended

Idaho was represented at the Los Angeles, A.M.A. session by President Manley B. Shaw, Boise; President-Elect Paul B. Heuston, Twin Falls; Delegate Alexander Barclay, Coeur d'Alene; Alternate delegate Donald K. Worden, Lewiston, and the Executive Secretary, Mr. Armand Bird.

John F. Stecher, Caldwell, in his position as Chairman of the association's Medical Aspects of Sports Committee attended a meeting sponsored by the AMA's Committee on Sports. Others attending the session included Dr. and Mrs. Mark Baum, Idaho Falls, and Dr. and Mrs. Ralph R. Jones, and Dr. and Mrs. Paul F. Miner, all of Boise.

New officers

North Idaho District
- President—Oliver M. Mackey, Lewiston.
- Vice-President—William P. Marineau, Moscow.
- Secretary-Treasurer—Robert C. Colburn, Lewiston, (re-elected).
- Delegates: Bernard S. Heywood, William C. Mannschreck, David W. Heuskinveld, and Almon J. White, Lewiston; William H. Cone, Grangeville; David C. Valder and Roland D. Brooks, Moscow.

OBITUARY

DR. JOSEPH BENTON KOEHLER, *55, died in Pocatello, November 23, 1962. He was born in Denver, Colorado, August 25, 1906, and received a degree in engineering from the University of Colorado, Boulder, in 1930. His medical degree was granted by the University of Colorado School of Medicine in June, 1937, following which he interned at the Colorado General Hospital. He was licensed in Idaho in 1938. Dr. Koehler practiced in Grace and Soda Springs for many years before entering a residency program in Denver in eye, ear, nose and throat, following which he established his practice in Pocatello.*

Dr. Koehler was active in organized medicine. He served as president of the Southeastern Idaho District Medical Society in 1957-58 and was a member of a number of association committees.

Books

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—SIR WILLIAM OSLER

RECEIVED: *The following books have been received. Publication of this acknowledgement is to be considered adequate return to the sender. Selected titles will be reveiwed as space permits.*

Cosmetic chemistry for dermatologists. American Lecture Series.

By Emil G. Klarmann, Sc.D., D.Sc.(Hon.), Ch.E., Lecturer, Department of Dermatology, New York University Post-Graduate Medical School, New York City. 126 pp. Tables and graphs. Price $5.75. Charles C Thomas, Springfield. 1962.

Biochemistry of skin in health and disease. American Lecture Series.

By Christopher Carruthers, Ph.D., Associate Cancer Research Scientist, Biochemistry Research Department, New York State Department of Health, Roswell Park Memorial Institute, Associate Research Professor, Graduate School of Arts and Sciences, University of Buffalo, New York. 263 pp. Illustrated. Price $9.75. Charles C Thomas, Springfield. 1962.

Rhythmic functions in the living system. Annals of The New York Academy of Sciences, Volume 98.

By William Wolf, Conference Editor, and various contributors. Papers from conference held and supported jointly by The New York Academy of Sciences and the Foundation for the Study of Cycles, New York, November 1961. 573 pp. Illustrated. The New York Academy of Sciences, New York. 1962.

Synopsis of roentgen signs.

By Isadore Meschan, M.A., M.D., Professor and Director of the Department of Radiology, Bowman Gray School of Medicine, Wake Forest College, Winston-Salem, North Carolina, with the assistance of R.M.F. Farrer-Meschan, M.B., B.S., M.D., Research Associate, Department of Radiology, Winston-Salem School of Medicine, Wake Forest College, Winston-Salem, North Carolina. 436 pp. Illustrated. Price $11.00. W. B. Saunders Company, London and Philadelphia. 1962.

Eczema: its nature, cure, and prevention.

By Arthur Bobroff, M.D., Dermatologist, Health Service, Hall Health Center, University of Washington, Clinical Instructor in Medicine, University of Washington School of Medicine, Seattle. 244 pp. Graphs. Price $9.50. Charles C Thomas, Springfield. 1962.

Office procedures. Second edition.

By Paul Williamson, M.D. 448 pp. Illustrated. Price $13.50. W. B. Saunders Company, Philadelphia and London. 1962.

Atlas of prostatic surgery.

By Perry B. Hudson, M.D., Professor of Zoology, Columbia University; Attending Surgeon-in-Charge, Urology Service, Montefiore Hospital, New York City; and Arthur Purdy Stout, M.D., Retired Professor of Pathology, Emeritus Professor of Surgery, Columbia University; Consultant Pathologist, Presbyterian Hospital and Francis Delafield Hospital, New York City, and East Orange Veterans Administration Hospital, East Orange, New Jersey. 170 pp. Illustrated. Price. $13.50. W. B. Saunders Company, Philadelphia and London. 1962.

Synopsis of genitourinary disease. Seventh edition.

By Austin I. Dodson, Jr., M.D., Associate Clinical Professor of Urology, Medical College of Virginia, Richmond, Virginia, and J. Edward Hill, M.D., Assistant Clinical Professor of Urology, Medical College of Virginia, Richmond, Virginia. 384 pp. Illustrated. Price $7.75. The C. V. Mosby Company, St. Louis. 1962.

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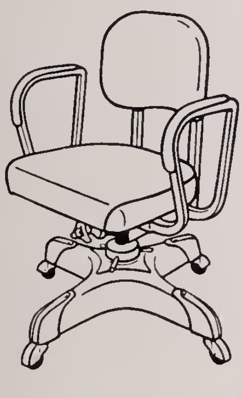

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Meetings OF MEDICAL SOCIETIES

AMA Annual—Atlantic City, June 16-20, 1963; San Francisco, June, 21-25, 1964, New York, June 20-24, 1965.

AMA Clinical—Portland, Dec. 1-4, 1963; Miami Beach, Nov. 29-Dec. 2, 1964.

Oregon State Medical Society—Sept. 25-28, 1963, Portland.

Washington State Medical Association—Sept. 15-18, 1963, Seattle.

Idaho State Medical Association—June 23-27, 1963, Sun Valley.

North Pacific Society of Neurology and Psychiatry—April, 1963, Seattle
Pres., Robert M. Rankin, Seattle
Sec., Thomas H. Holmes, Seattle

Pacific Northwest Obstetrical and Gynecological Association — June 3-5, 1963, Victoria, B.C.
Pres., R. R. de Alvarez, Seattle
Sec., J. McDonagh, Vancouver, B.C.

Biennial Western Conference on Anesthes.—Mar. 25-28, 1963, Honolulu.
Chrmn., John Dillon, Los Angeles
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Ore. Acad. Ophth. & Otolar.—Portland Aero Club, 4th Tue., Sept.-May.
Pres., M. Harvey Johnson, Portland
Sect., D. W. McDaniel, The Dalles

Oregon Dermatologic Society—Portland 2nd Wednesday (Nov., Jan.-Apr.)
Pres., Sheldon Walker, Portland
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Oregon Pathologists Association—Portland, 2nd Wednesday (Feb., Apr., Oct., Dec.)
Pres., F. L. Vrtiska, Corvallis
Sec., A. A. Oyama, Portland

Oregon Radiological Society—University Club, Portland, 2nd Wednesday through school year
Pres., L. A. Gay, The Dalles
Sec., G. R. Satterwhite, Portland

Ore. Soc. Obst. & Gynec.—Portland, Park Heathman, 3rd Fri. (Oct., Nov., Jan., May)
Pres., W. L. Hartmann, Portland
Sec., T. A. Treanor, Portland

Oregon State Society of Anesthesiologists—Portland, 3rd Friday (except June, July, Aug.)
Pres., J. A. Siebs, Eugene
Sec., P. E. Schaff, Portland

Oregon Urological Society—Quarterly Meetings, University Club, Portland
Pres., T. A. Davis, Portland
Sec., G. W. Schwiebinger, Portland

Portland Academy of Hypnosis — 3rd Monday (Sept.-May) Aero Club
Pres., V. P. Shoemaker
Sec., M. S. Skiff

Portland Academy of Pediatrics—1st Monday
Pres., W. M. Clark, Jr.
Sec., J. W. Bussman

Portland Surgical Society—last Tuesday (Sept.-May), UOMS Library
Pres., J. M. Guiss
Sec., H. W. Baker

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Puget Sound Academy of Ophthalmology and Otolaryngology—3rd Tuesday (Oct.-May), Seattle or Tacoma
Pres., J. M. Shiach, Seattle
Sec., L. N. Hungerford, Jr., Seattle

Seattle Academy of Surgery—Jan. 19, 1963, Olympic Hotel, Seattle; 3rd Wednesday (June, Oct.)
Pres., E. B. Parmalee
Sec., W. S. Brown

Seattle Gyn. Soc.—3rd Wed. exc. June, Aug., Dec., Feb.
Pres., D. M. McIntyre, Seattle
Sect., E. T. MacCamy, Seattle

Seattle Pediatric Society—3rd Friday (Sept.-May), College Club
Pres., R. F. L. Polley, Seattle
Sec., G. Pyne, Seattle

Seattle Surgical Society—Jan. 18-19, 1963, 4th Monday (Sept.-June)
Pres., Donald T. Hall
Sec., Lucius D. Hill

Spokane Society of Internal Medicine—Quarterly, Rockwood Clinic
Pres., Robert Berghan
Sec., Richard E. Steury

Spokane Surgical Society—April 6, 1963, Davenport Hotel
Pres., F. M. Lyle
Sec., C. R. Cavanagh

Tacoma Academy of Internal Medicine—4th Tuesday (Sept.-May)
Pres., R. A. Kallsen
Sec., R. A. O'Connell

Tacoma Surgical Club—May 4, 1963, 3rd Tuesday (Sept.-May)
Pres., Dumont Staatz
Sec., Robert B. Burt

Washington Academy of Clinical Hypnosis—3rd Friday (Sept.-June)
Pres., Edward G. Goodrich, Ph.D., Seattle
Sec., John E. Nelson, Seattle

Washington Academy of General Practice—May 17-19, 1963, Wenatchee.
Pres., Louis Dewey, Omak
Sec., J. E. Gahringer, Jr., Wenatchee

Washington State Obstetrical Association—March 30, 1963, Seattle
Pres., R. K. Plant, Seattle
Sec., F. LeCocq, Yakima

Washington State Radiological Society—Seattle, 4th Mon., (Sept.-Apr.) Business Session, Meany Hotel, Scientific Sn. UWSM X-ray Dept.
Pres., W. A. Chesledon, Seattle
Sec., R. H. Rosenberg, Seattle

Washington State Society of Allergy—May, 1963, Portland
Pres., James W. Georges, Seattle
Sec., Paul P. Van Arsdel, Jr., Seattle

Wash. St. Soc of Anesthesiologists.
Pres., M. W. Bulmer, Wenatchee
Sec., Robt. M. Kintner, Wenatchee

Washington State Society of Internal Medicine—Sept. 18, 1963
Pres., D. M. Ulrich, Seattle
Sec., J. H. Lindberg, Seattle.

Yakima Obstetrical and Gynecological Society—Last Monday (except July, Aug., Dec.)
Sec., A. W. Bostrom, Jr.

Yakima Surgical Society—Last Thursday (Sept.-May)
Pres., H. C. Lynch
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REFERENCES: (1) Baker, A. G.: Penn. Med. J. *63*:697 (May) 1960. (2) Smith, R. T.: New York Med. (Aug. 20) 1952, pp. 16-19. (3) Smith, R. T.: Med. Clin. N. Amer. (Mar.) 1957. (4) Lehrer, H. W.; Lehrer, H. G., and Lehrer, D. R.: Northw. Med. (Nov.) 1955. (5) Sforzolini, G. S.: Arch. Ophthal. *62*:381 (Sept.) 1959.

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*Maxwell, M.H., *et al.:* JAMA *170*:917 (June 20) 1959.

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Volume 62—Number 2
February, 1963

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References: (1) Thacher, H. C., & Fishman, L.: *J. Maine M. A.* **52**:84, 1961. (2) Hopkins, E. W.: *Postgrad. Med.* **29**:451, 1961. (3) Hall, W. H.: *M. Clin. North America* **43**:191, 1959. (4) Krugman, S.: *Pediat. Clin. North America* **8**:1199, 1961. (5) Ede, S.; Davis, G. M., & Holmes, F. H.: *J.A.M.A.* **170**:638, 1959. (6) Wolfsohn, A. W.: *Connecticut Med.* **22**:769, 1958. (7) Calvy, G. L.: *New England J. Med.* **259**:532, 1958. (8) Hendren, W. H., III, & Haggerty, R. J.: *J.A.M.A.* **168**:6, 1958. (9) Cutts, M.: *Rhode Island M. J.* **43**:388, 1960. (10) Berman, W. E., & Holtzman, A. E.: *California Med.* **92**:339, 1960. (11) Vetto, R. R.: *J.A.M.A.* **173**:990, 1960. (12) Sia, C. C. J., & Brainard, S. C.: *Hawaii M. J.* **17**:339, 1958. (13) Rosenthal, I. M.: *GP* **17**:77 (March) 1958. (14) Gaisford, W.: *Brit. M. J.* **1**:230, 1959.

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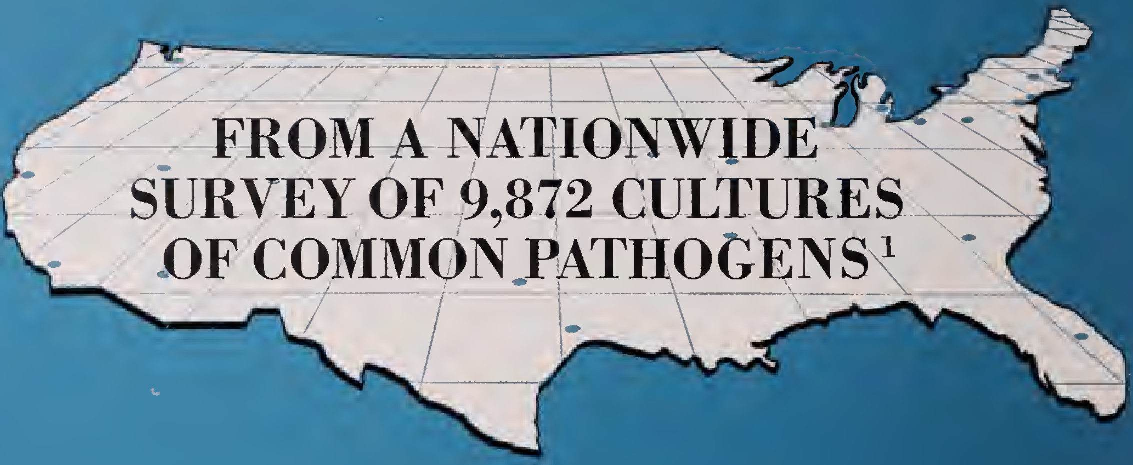


FROM A NATIONWIDE SURVEY OF 9,872 CULTURES OF COMMON PATHOGENS[1]

Conclusions of Nationwide Survey: *Report I*

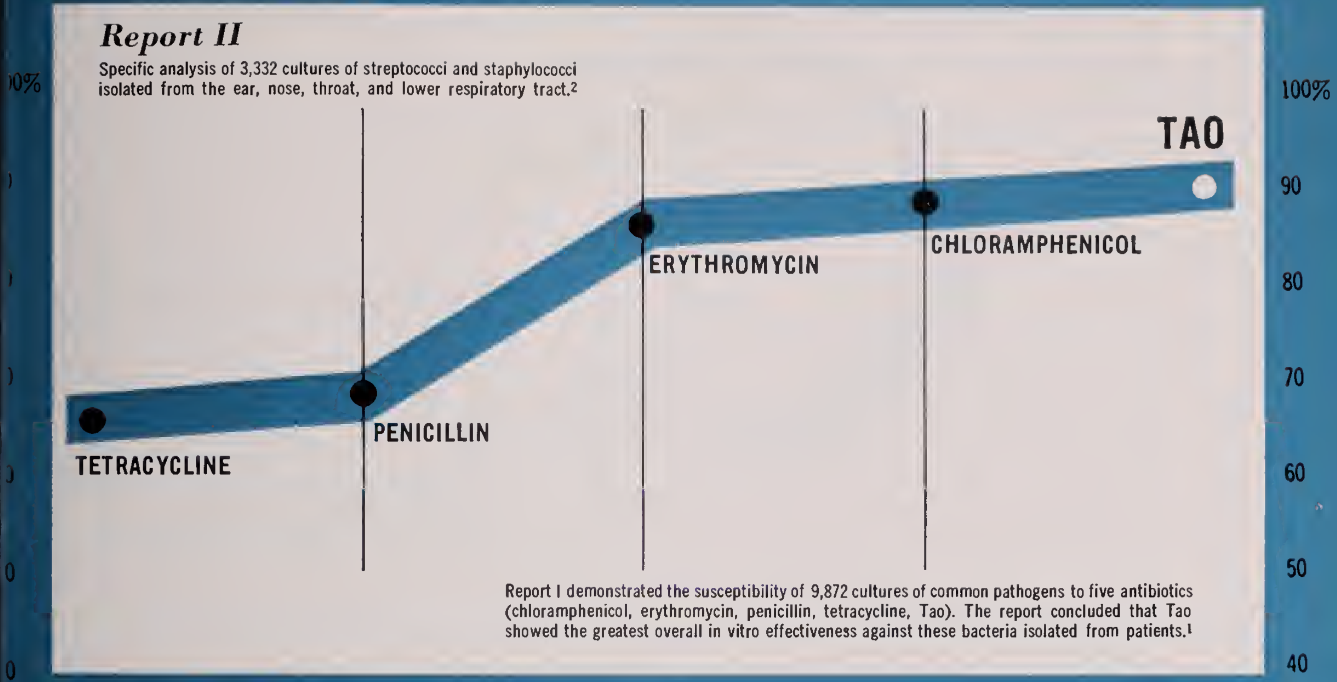
1. **Even after five years of general use,** Tao, of the antibiotics tested, demonstrated greatest activity against respiratory streptococci and staphylococci (3,332 cultures).

2. **Overall results showed a higher percentage of susceptibility** among these common pathogens to Tao than to the other antibiotics. Susceptibility to Tao was greatest, not only in respiratory streptococci and staphylococci, but also in these organisms isolated from skin and soft tissue (3,423 cultures), genitourinary and gastrointestinal tracts and other sources (2,458 cultures). Susceptibility was equal to all antibiotics tested in pneumococci from unspecified sources (463 cultures), and less to Tao in H. influenzae from unspecified sources (196 cultures).

3. **Tao has been used for five years without development of predictable cross resistance.** In 1958 and 1961, approximately 73% and 70%, respectively, of erythromycin-resistant problem staphylococci showed susceptibility to Tao.[3,4] The present study confirms the continuing high degree of Tao activity even against these pathogens. Of 1,592 cultures of erythromycin-resistant staphylococci, 68% were susceptible to Tao, while in the reverse situation, only 33% of 768 Tao-resistant staphylococci were susceptible to erythromycin.

Report II

Specific analysis of 3,332 cultures of streptococci and staphylococci isolated from the ear, nose, throat, and lower respiratory tract.[2]



Report I demonstrated the susceptibility of 9,872 cultures of common pathogens to five antibiotics (chloramphenicol, erythromycin, penicillin, tetracycline, Tao). The report concluded that Tao showed the greatest overall in vitro effectiveness against these bacteria isolated from patients.[1]

Report II

Results of Bacterial Susceptibility in 3,332 Respiratory Pathogens

References

1. "Bacterial Susceptibility Patterns: A Geographic Survey." Fowler, J. Ralph, M.D., and Watters, John L., M.D. Scientific Exhibit presented at the Annual Meeting of the American Society of Clinical Pathologists, Chicago, Ill., August 31 to September 9, 1962. 2. Fowler, J. Ralph, Watters, John L. and Levy, Arthur M.: Bacterial Susceptibility Patterns as Related to Geographic Variation and Anatomical Source. In press. 3. English, A. R., and Fink, F. C.: Antibiot. & Chemother. 8:420 (Aug.) 1958. 4. English, A. R., and Fink, F. C.: Antibiot. and Chemother. 11:648 (Oct.) 1961.

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Not a representative picture

EDITOR, NORTHWEST MEDICINE

A number of Seattle psychiatrists have voiced concern about the December issue of NORTHWEST MEDICINE containing an editorial on "Mental Health" and the two articles entitled: 1. "Mental Illness —Is it a Major Problem?" and 2. "Mental Illness as Seen by Five Medical Specialities in King County, Washington." Our chief concern is that the impressions may have been given that the problem of mental illness and health is of no great consequence because doctors see so little of the problem in their office and hospital practices.

We do not believe that a completely representative picture of the problem of mental illness and health can be obtained by a method which samples only the routine diagnostic categorizations from office and general hospital practice. In addition to a number of unreliable features in the method, there appears to be a relatively large percentage of people with serious mental health problems that would be completely apart from this type of sampling. This objection is substantiated in the more comprehensive studies of the Commission on Chronic Illness, an independent agency founded jointly by the American Medical Association, the American Hospital Association, the American Public Health Association, and the American Public Welfare Association in 1952. The commission studies show a prevalence rate of psychiatric disorders to be one person in ten of the urban population studied. Perhaps a more staggering fact was revealed in the more recent study by Benjamin Pasamanick ("A Survey of Mental Disease in an Urban Population," *Archives of General Psychiatry,* August, 1961). He found that by sampling the total population of the area studied (hospital patients included), one person in forty was severely or totally impaired by mental or emotional difficulties. In his words, "It is quite safe to say, therefore, that no other group of diseases approaches the psychiatric disorders in the number and frequency of severely and chronically disabled individuals."

What does it mean then to find a low incidence of psychiatric disorders in the diagnostic surveys based only upon office and general hospital practice? Certainly it does not mean that there is no major problem of mental illness and health. We think that it only reflects the well-known fact that doctors in private medical practice have not as yet taken a major role in the problem.

This reported low incidence rate is no cause for jubilation as some might think. For example, on December 11, 1962, the *Seattle Post-Intelligencer* ran an editorial (not a news item) about the editorial and the two articles referred to in this letter. The *P.I.* editorial made much of the idea that since doctors do not see much mental illness in their office or hospital practices, it must not be a major problem and is only a matter of over-exaggeration. However, a well-informed reader might have more correctly inferred that doctors and general hospitals, by their own statistics, are involved appallingly little in a major health problem.

What is the answer to this state of affairs which involves many complex issues not unrelated to medicine? Obviously, a part of the answer is that the participation of many more professionally skilled people (doctors most of all) is needed in meeting the problems of mental illness and health. We think that the recent American Medical Association Mental Health Congress is an important step in the right direction.

Yours sincerely,

FRANCIS S. BOBBITT, M.D.

President, Committee of Psychiatrists for Community Action, Seattle

Invitation to Writers

EDITOR, Northwest Medicine

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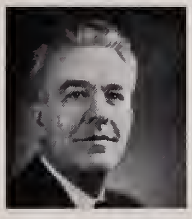

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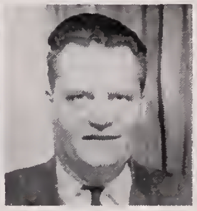

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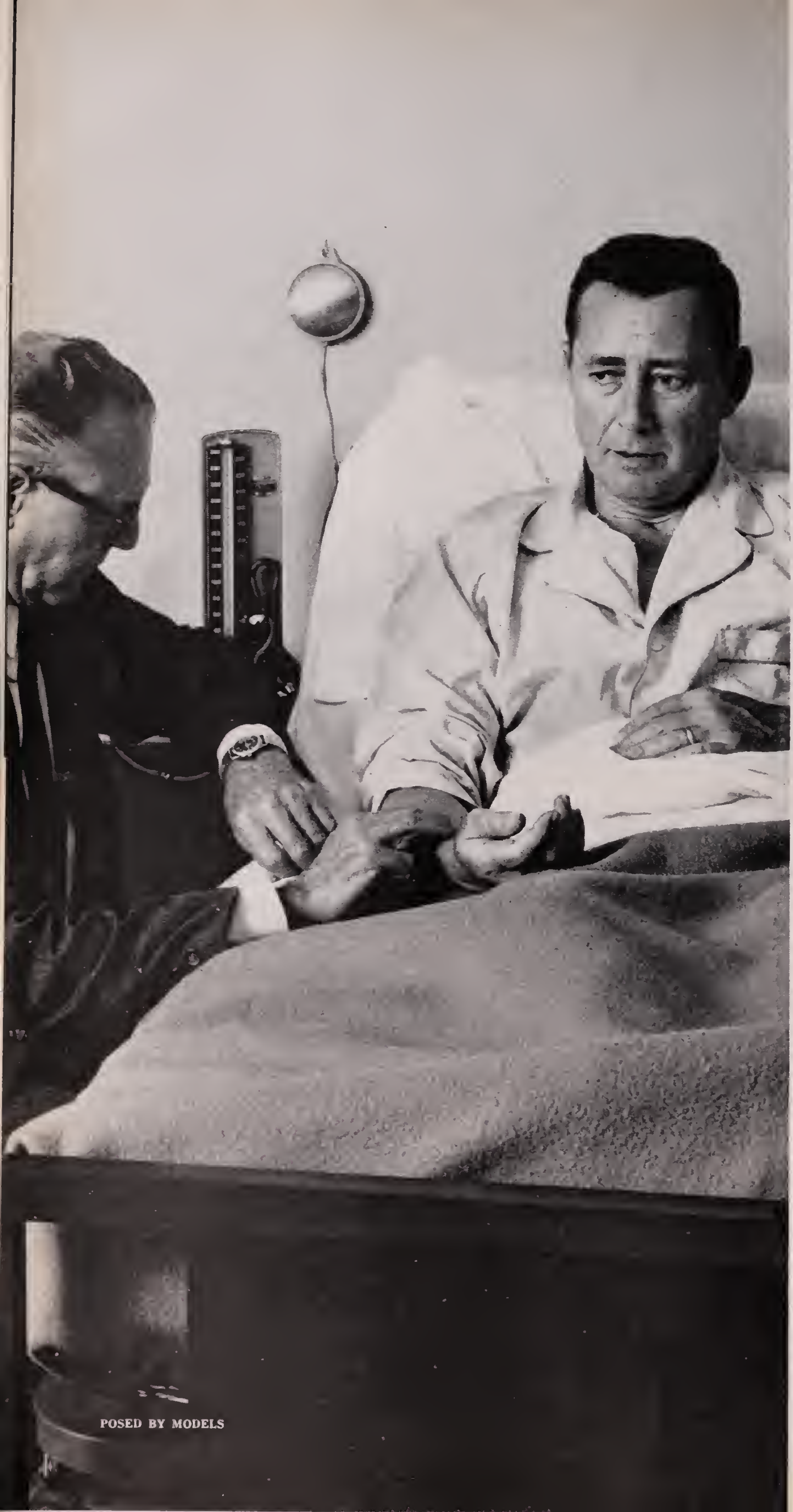

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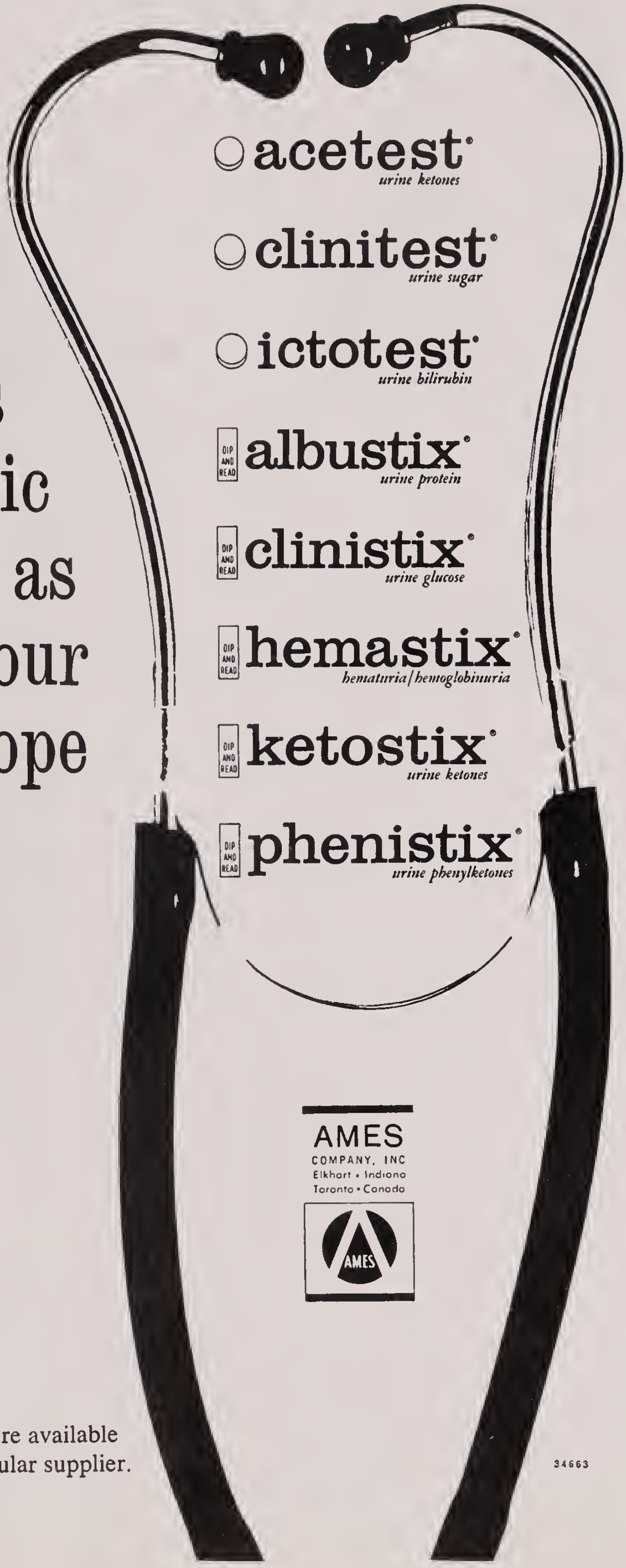

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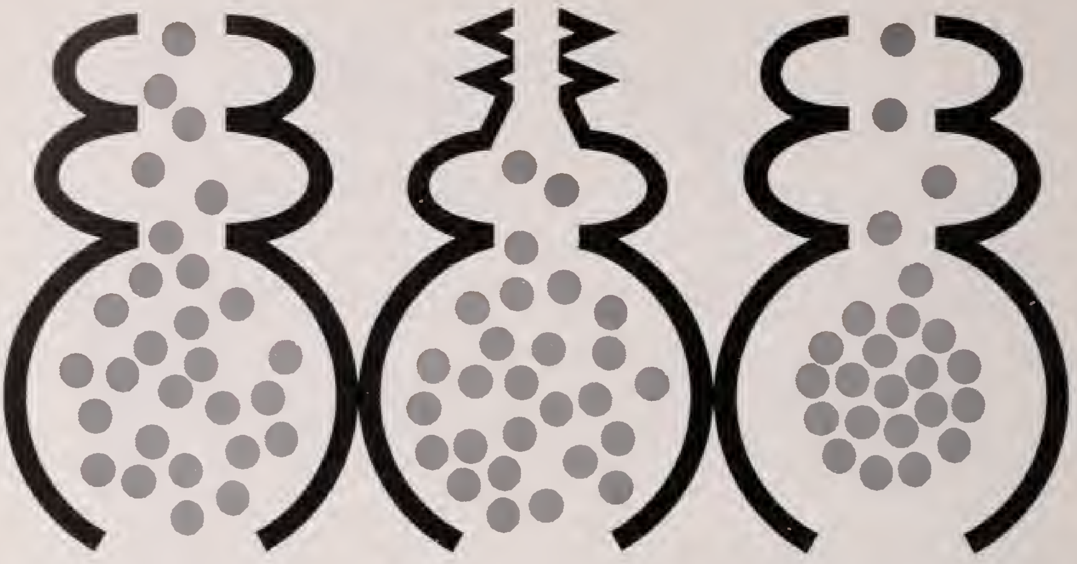

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1. Janssen, P. A. J., and Jageneau, A. H.: A New Series of Potent Analgesics: Dextro 2:2-Diphenyl-3-Methyl-4-Morpholino-Butyrylpyrrolidine and Related Amides. I. Chemical Structure and Pharmacological Activity, J. Pharm. Pharmacol. 9:381-400 (June) 1957.
2. Cayer, D., and Sohmer, M. F.: Long-Term Clinical Studies with a New Constipating Drug, Diphenoxylate Hydrochloride, N. Carolina Med. J. 22:600-604 (Dec.) 1961.

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Transition with Dignity

Osteopathy today is not what it was when the physician, Andrew Taylor Still, founded what came to be known as a cult. In a sense, osteopathy no longer exists. Most of those now obliged by law to call themselves osteopaths have long since abandoned osteopathy as such and recognize, with the American Medical Association, that "there can never be a majority party and a minority party in any science" and that "there cannot be two distinct sciences of medicine and two different, yet equally valid systems of medical practice."

These statements were approved by the AMA House of Delegates at New York in June, 1961. The House also stated that "Recognition should be given to the transition presently occurring in osteopathy, which is evidence of an attempt by a significant number of those practicing osteopathic medicine to give their patients scientific medical care. This transition should be encouraged so that the evolutionary process can be expedited."

The AMA position on osteopathy is in full accord with its constitutional objects, unchanged for more than a century—"To promote the science and art of medicine and the betterment of public health." It is clear that assistance given those who wish to make the transition from cultism to scientific medicine is an excellent way to promote the science and art of medicine. Medical care is now being given by osteopaths to many thousands. If these practitioners can be helped to improve the science and art with which they practice, the utlimate benefit is to the public.

The evolution sought by the AMA House has been proceeding apace. In California, a school formerly teaching medicine labeled as osteopathic has been converted to a medical school and it is discharging its obligation admirably. It has performed a great service to California by granting medical degrees to more than two thousand osteopaths qualified by training and experience to practice scientific medicine. There seems to be no valid reason why older medical schools of impeccable standing could not likewise promote the science and art of medicine and the betterment of public health. Proper service to the public would seem to demand no less.

The procedure followed in California has, unfortunately, not been made available to other states seeking to expedite the evolutionary process. The California school has granted medical degrees only to qualified osteopaths holding valid license to practice osteopathic medicine in California. Well established medical schools in other states have not been willing to grant degrees to those qualified by knowledge and experience. The remaining problem is difficult.

Progress has been made in Washington where the state medical association has given enthusiatic support to the committee working on the problem. Negotiations have been going on for some time, with osteopaths and physicians dedicated to the idea that improvement in service to the public is the paramount consideration. With this principle in mind, most of the osteopaths in the state are doing everything in their power to advance the quality of office and hospital care rendered their patients. They have separated themselves from those osteopaths who do not wish to associate with physicians, and now are without professional organization or representation. They cannot yet be taken into a county medical society simply because they do not hold medical degrees. There is no other reason. This would seem to be a matter easily remedied but it is not.

In view of the importance of this matter to the general public, it is essential that new degrees be obtained for these practitioners in a manner lending the most dignity to the process. There are sound reasons why these degrees should be granted by established medical schools whose position is above question and whose ideals should certainly extend to promoting the science and art of medicine and the betterment of public health. They could hardly carry out these objectives more precisely than by helping these sincere, devoted, practitioners who are so anxious to improve themselves and who are willing to gauge their own performance by standards set for the best in medicine. ■

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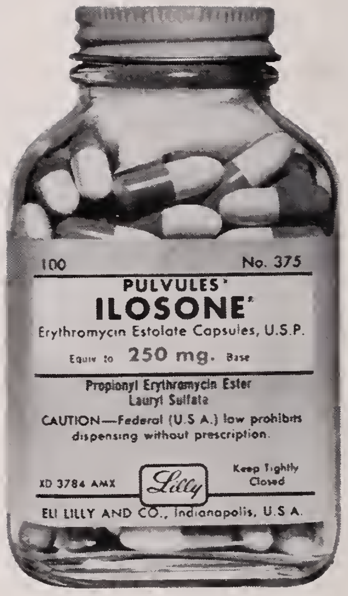
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Radiation Injury and Its Surgical Treatment

VERNER V. LINDGREN, M.D. Portland, Oregon

Plastic surgeons throughout the world have long had a serious problem in the care of the patient with radiation injuries. Now we are living in an era when the danger of nuclear warfare, with the fallout of radioactive material, is a frightening possibility. This has a tendency to potentiate our already grave problem of over-radiation.

I do not intend, in any way, to attack radiotherapy or radiotherapists who are doing valuable and indispensable work in their phase of the care of malignant disease. Rather, it is my intention to cooperate with them and to come to a mutual understanding as to the type of treatment that will, by necessity, give the patient the maximum benefit on a long-term basis, both cosmetically and functionally. McIndoe indicated that few radiologists realize how common radiation necrosis is. Firstly, the patient who has been burned, often does not return to the radiologist who inflicted the burn, and secondly, the serious effects, for example ulceration and malignant change, often do not occur until years after the original burn.[1]

etiology

Macomber et al have stated that the most common etiology for irreversible radiation damage has been the use of roentgen rays in the treatment of benign skin lesions. These were either benign skin tumors, such as hemangiomata or nevi, 38 per cent; or chronic dermatological conditions, such as acne, 24 per cent. The use of irradiation for the treatment of superfluous hair around the lips of women accounted for 14 per cent of their patients. More severe forms of irradiation damage of the skin, following therapeutic doses of roentgen therapy for the deep-seated malignant tumors, comprised only 14 per cent. The cumulative effects of repeated short exposure to radiation, as with physicians' hands accounted for 4.8 per cent.[2]

Dental X-ray is dangerous, due to short focal distances and use of a low filter. Skin dosage received in diagnostic examination must *not* be overlooked, especially if multiple films or repeats are required. Extreme care should be taken in dental and pregnancy surveys because it is possible in unfavorable screening conditions to deliver an erythema dose in two to five minutes. In almost every case the skin dose can be cut 50 per cent by increasing the focal skin distance or the filtration, or both.[3]

pathology

The microscopic and gross changes following irradiation injury have been described by many authorities. Varying with the amount of radiation, the speed of absorption, and the relevant irradiation sensitivity of the tissue, the basic cell reaction is that of ionization. This is manifested by coagulation of chromatin and disintegration of cell nuclei with subsequent vacuolization, and may end in necrosis. Usually young growing cells are more sensitive than mature cells. Cartilage is more sensitive than bone. Most resistant are muscle and nerve cells.[2]

Fleming believes that the primary effect is disturbance in the structure or the electrical

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stability of atoms which compose the complex molecules of living protoplasm. This, in turn, probably gives rise to a series of biological changes that interfere with the normal metabolic pathways of the living cell.[4]

acute radiodermatitis

Acute radiodermatitis is more commonly found when a rather large dose is given over a relatively short period of time. The skin reaction is primarily inflammatory, and development of carcinoma is not commonly seen in the early phase. Vascularity of superficial layers of the dermis is increased, with extravasation of red cells and leukocytes in the subdermal layer. Capillaries frequently dilate, and the resultant telangiectatic state is present in the upper dermis. When extremely large doses are given originally, this may result in destruction of the epidermis and dermis with sloughing and formation of an ulcer of any depth or width which may never completely heal but go on to a chronic irradiation effect. According to Bishop, "The restitution following even a single dose may never allow the skin to return to normal."[5]

The acute burned areas are frequently very painful, particularly over cartilagenous surface. The chrondritis which develops can cause the patient extreme discomfort, and removal of cartilage in the areas of radiation chrondritis is often necessary to eliminate pain.

chronic radiodermatitis

There may be a prolonged latent period between the time of the original treatment and clinical evidence of radiodermatitis. Time factor for various pathologic conditions has been estimated as: (1) telangiectasis, 3 to 10 years; (2) coal spots and keratoses, 10 to 15 years; (3) malignant changes 20 to 25 years, though in 20 per cent of cases, these can occur as early as 3 years.[6]

Frequently seen are pigmentation, telangiectasia, scarring and atrophy of the skin and, at a later date, ulceration and infection. These conditions can be caused by the *cumulative effect* of multiple small doses over a long period of time or massive doses over a relatively short period of time. It is generally accepted that the effects of radiation on living tissue *do not cease* with the initial application or treatment but may well progress over the years. The hair follicles, sweat glands, and sebaceous glands are highly sensitive, and their atrophy follows long-term or chronic radiation injury. Other tissue responses are thickening and rigidity of skin, hyperkeratoses, fissuring of skin and thickening of nail beds. Proliferative endarteritis and endothelial hyperplasia develop with resulting thrombosis and obliteration. Degenerative changes take place in the sweat glands and hair follicles. Superficial ulceration may occur spontaneously or following minor trauma. Healing is extremely delayed in these instances. When infection develops, the ulcer may spread and become chronic in nature.[5]

malignant changes

Various authors report that malignant changes following chronic radiodermatitis are very common. The percentages vary from 10 to 20 per cent. The presence of coal spots (petechia secondary to vascular changes) in connection with recurring ulceration represents continuous stimulation of the epithelium to proliferation and eventual malignant change, which most frequently is of the squamous cell type.[6] Basal cell epitheliomas develop less frequently. A basosquamous change is possible, but sarcoma is rare.[2] One may have multiple malignant lesions within an area of radiodermatitis. The squamous cell epitheliomata are slow to spread and metastasize until they enter normal tissue, and then they "explode" in extremely rapid growth.

retardation of growth

One of the saddest problems in the care of radiation injuries is the deformity that can develop in a child following extensive radiation. Severe retardation of growth produces irreversible change. The growing cell is far more sensitive to radiation than the adult cell. Warren found that a dosage of irradiation damaging to the bones of infants and children has been variously estimated at between 25 to 50 per cent of the erythema dose for an adult. He pointed out also that the cartilage cells of the epiphysis are highly sensitive to radiation, while hyaline cartilages and osteoblasts are relatively resistant. In this same respect, the mandibular condyle has a potential and growth mechanism not unlike that of long bone.[7]

prophylactic treatment

It is felt that the medical profession should be frequently reminded of (1) the hazards of injudicious radiotherapy; (2) the folly of irradiation of benign conditions, especially in children; and (3) the utilization of surgery for adequate excision and repair of the initial lesion and at as early a date as possible.[5] An exception must be made in Grenz ray treatment of keloid scars, but even here, the treatment must be moderate and conducted with great care by skillfully trained physicians. Ordinarily, superficial therapy of up to 600 r. produces minimal damage.

It must be recognized that skin sensitivity to ultra violet light and radiation varies greatly with different individuals. The classic example of sensitive skin is that found in people with red hair. A mild dosage to the red head's skin can frequently produce a severe reaction and damage, while the same dosage to the average person with more pigmented skin may show no effect of radiation. It is, therefore, probable that the majority of people with deeply pigmented skins may have greater natural resistance to the effects of radiation.

treatment

The treatment of irradiation injuries is surgical. This implies complete removal of the diseased tissue and immediate coverage of the resultant wound, either by means of a free skin graft or a pedicle flap. The excision of all radiation lesions must be well wide of the involved area and to a depth that brings viable healthy bleeding tissue. At times this may be quite deep, involving many of the deeper structures. At times it is necessary to remove an ear, a nose, an eye, or produce some unsightly defect. Occasionally it is necessary to leave a deeper scar in an important organ and rely on the healing effects of a healthy skin flap. If malignant changes are suspected, the surgeon must be certain that wide removal is obtained in all directions.[5] The use of frozen sections to determine margins and depth is helpful in invading carcinoma, but it does not help in delineating radiation damaged tissue to the point of good blood supply. The potentially malignant areas such as hyperkeratoses or hyperplastic changes, are more difficult. The routine paraffin slides are more specific. *Cautery must never be used for hemostasis* because this causes further damage to the blood supply. On occasion you will find some physicians who treat malignancies secondary to radiation with further radiation therapy. *This is definitely contraindicated.*

Many different methods of closure are available following removal of the involved tissue. The small wound may be closed by approximation but frequently a skin graft is indicated for coverage. Conservative treatment in radiation injuries usually fails to effect a cure. Depth of the necrosis can rarely be predetermined, and one must be prepared to change the method of coverage from that previously planned. One must be able to switch from a split graft to a pedicle graft, if it is indicated. Split-thickness skin grafts are recommended on a non-weight bearing area and where no vital structures are exposed.[2] Especially in the older group this is a very quick and adequate method.

flaps

According to Macomber et al, pedicle flaps are indicated, (1) when the base of the surgical defect is lined by bone or dense fibrous tissue, for the vascularization of the structures has invariably been impaired by the radiation; (2) when a joint cavity, a fistulous defect, or vital structures, such as tendon or nerves, are exposed; (3) when bulky tissue is needed to maintain the function of a mobile and contractile structure, such as a lip. Whenever possible, a local pedicle flap should be used to make a one-stage completion of the procedure. Delay in excision of the lesion should be avoided. Utilization of a neighboring skin flap is not without its hazards. Various degrees of vascular change, with reduced blood flow, are present, even in the skin neighboring an area of radiodermatitis. In utilizing such tissue as a pedicle flap, the plastic surgeon must be certain of the viability of the flap. The local rotation flap does have the advantage of bringing its own, but probably reduced, blood supply. If use of a neighboring flap is impractical, a distant flap, either in the form of a tube or an open flap, can be used.[2]

One must always avoid tension on any pedicle flap. The use of cross-leg flaps in the older age groups may tend to limit motion of the extremities and may even accelerate arthritic changes. To immobilize an elderly patient in this manner is often unwise.

Most areas of radiation necrosis are sensitive and painful. Removal of the entire radiated area usually brings rather dramatic relief of pain. Patients should be warned of the possible failure of the grafts to take, over irradiated areas, for there is considerably more risk in coverage of these areas than on non-radiated defects.

Macomber has shown that retardation of growth secondary to radiation injuries may not be correctible by surgery. In the case of extremities, although the chronic radiodermatitis of the involved area can be replaced by free or pedicle grafts, the shortening of the involved limb is permanent and incurable. If the involvement is of the face, a minor depression deformity can be often corrected by simply replacing a thin, atrophic scar with a thick pedicle graft. If the skin pedicle alone would be inadequate, filling material, such as cartilage, dermal fat, or synthetic material can be used as a supplement. Poor dental occlusion secondary to retarded jaws bones is often associated with trophic, missing, or diseased teeth. Extraction of these diseased teeth followed by replacement with a well-fitted prothesis is a simple and effective method of treatment.[2]

CASE REPORTS

case 1

The first patient is a dentist who has been exposed to roentgen rays for over thirty-five years in his dental practice. Ten to fifteen years ago a dermatitis developed on his hand, with itching and pain. About two years prior to my seeing him, an ulcer developed which had never completely healed and which has been chronically painful. A few years ago one of the dermatologists *irradiated this radiation ulcer.* Figure 1 illustrates the area of radiation in the palm, in the thenar eminence of the left hand. On March 5, 1956, the entire irradiated area was removed, and a split thickness skin graft was used to cover the defect. Postoperative course was relatively uneventful, and the patient was last seen in the office a few months ago. At that time the hand was well healed, not painful, and he had obtained full function. Figure 1B shows the postoperative result.

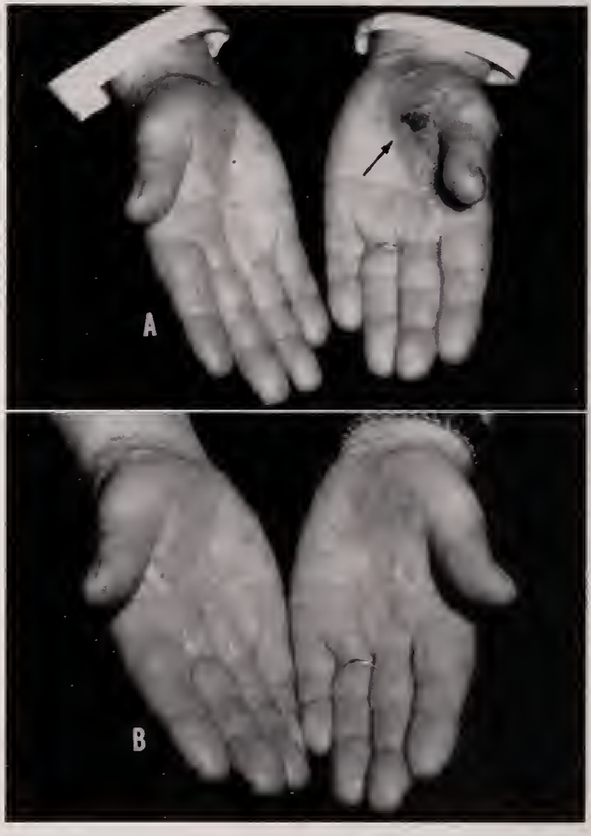

Fig. 1. Case 1. A, preoperative, B, postoperative appearance.

case 2

This child was first seen when she was about twelve years of age and gave a history of having had a large hemangioma on the left cheek. It was initially treated with radium, and there subsequently developed a rather severe atrophy of the area with extensive retardation of growth of bone. Photographs A and B, figure 2, taken when she was first seen, show the initial deformity with pigmentation, telangiectasia, and atrophy of the left cheek and lip area. Figure 2C shows the retardation of growth of the maxilla with secondary dental deformity.

On June 7, 1957, she was taken to surgery for the first stage, partial excision of the major area of radiation of the cheek. The defect was closed primarily. On November 20, 1958, the patient was again taken to surgery for excision of the remaining radiodermatitis, and rotation of a local flap from the cheek to fill in the defect. Figure 2D shows the patient following this rotation.

The patient's deformed upper teeth were removed, and a denture was constructed to fill the defect of the maxilla and build up the upper lip to a more normal contour. The sulcus beneath the upper lip was deepened, and figure 2E shows the appearance of the patient wearing her new dentures.

There still remained a definite filling defect in the left cheek area. The patient was returned

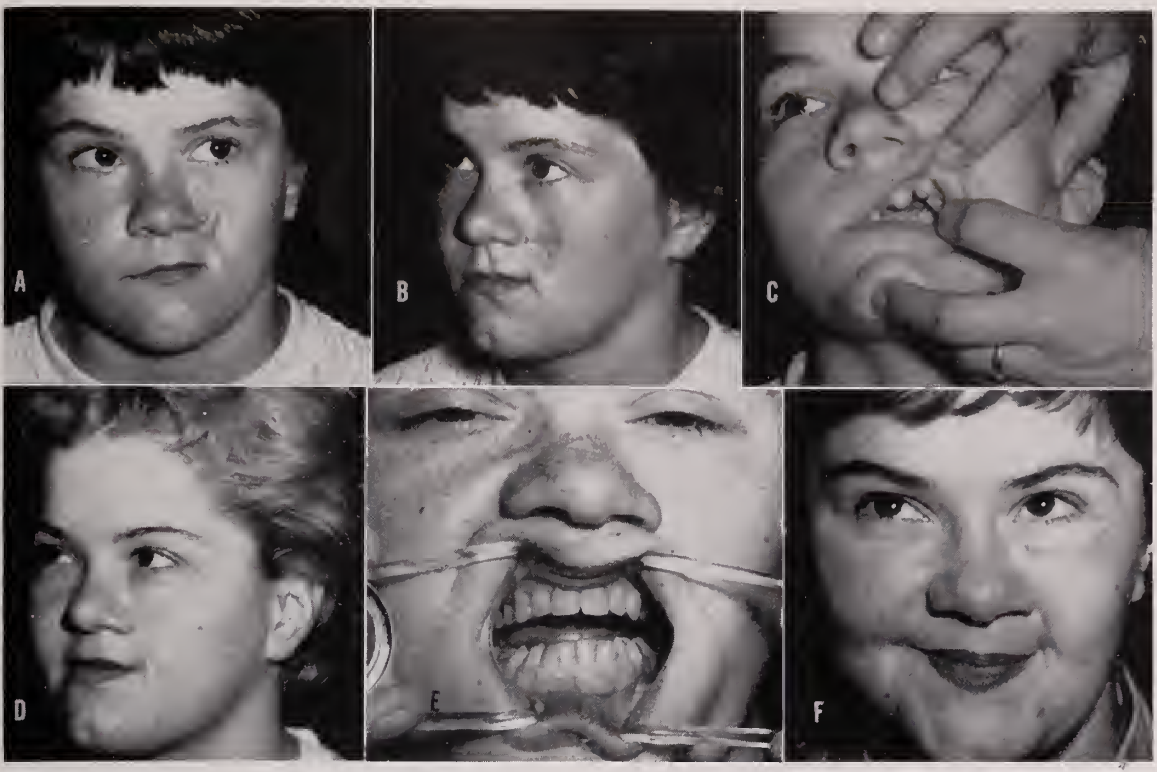

Fig. 2. Case 2. A, B, C, preoperative deformity of alveolar process is shown in C. D, after rotation of cheek flap. E, dental prosthesis in place. F, final result.

to surgery on October 11, 1960, at which time a polyurethane implant was shaped and embedded beneath the skin. This has built the cheek up to normal contour, and no reaction to the implant has been noted. There was no drainage. Figure 2F demonstrates the contour as it is today. She is wearing new dentures.

case 3

This thirteen and one-half-year-old girl was born with a hemangioma on the plantar surface of her foot. It was treated with radium when she was about nine months of age. The area treated, gradually developed typical radiation changes of atrophy, telengiectasia, and frequent recurring episodes of ulceration. The foot was extremely tender, and painful on walking.

The condition is shown in figure 3, A and B. With conservative treatment the inflammation subsided, and the ulcerated area healed. The patient was then taken to surgery, and on June 17, 1960, the radiated area was widely excised. A split-thickness skin graft was used to cover the defect. The graft was taken from the thigh

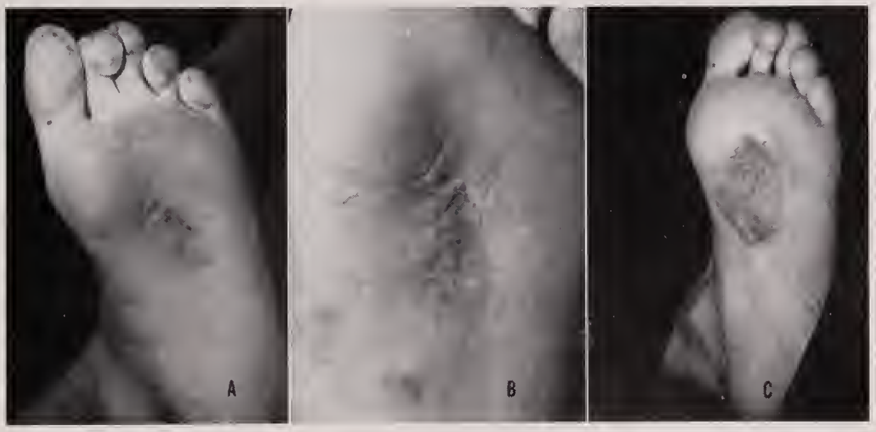

Fig. 3. Case 3. A, B, preoperative. C, condition one year after surgery.

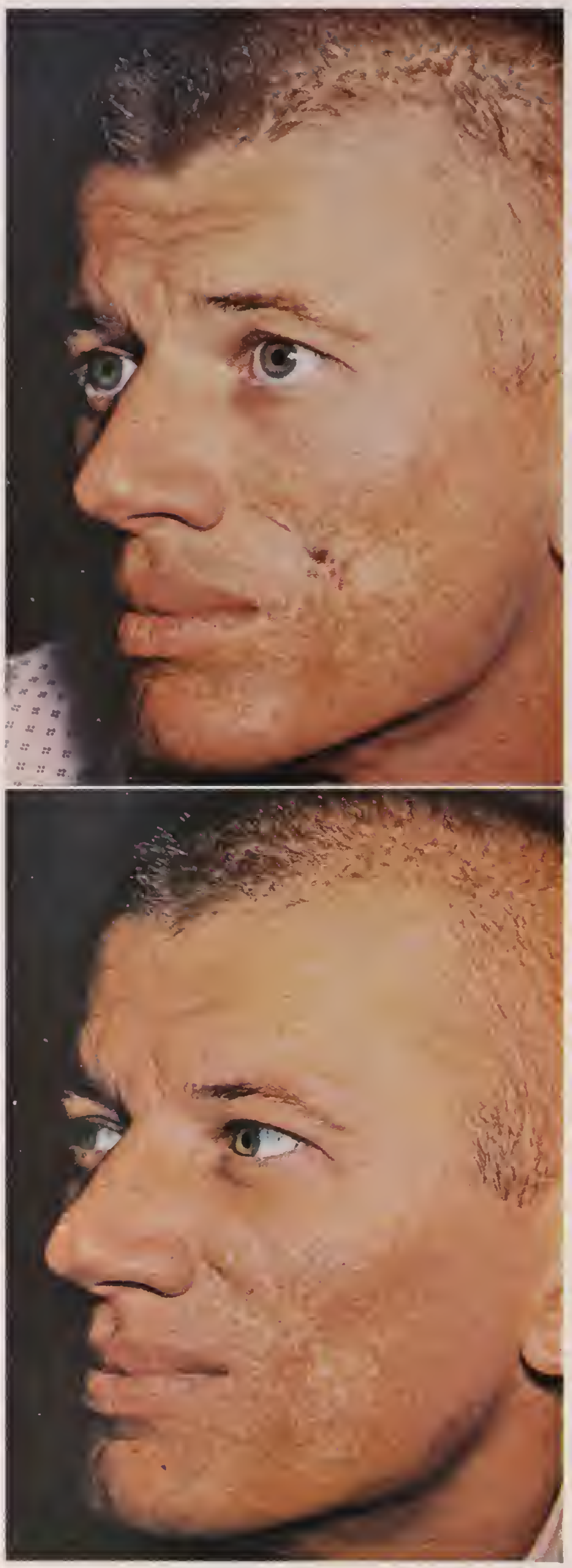

Fig. 4. Case 4. Above, preoperative lesion following radiation treatment for acne. Below, postoperative appearance.

and survived 100 per cent. The pathologist reported that there was no evidence of malignancy, but characteristic changes of radiodermatitis were present. Figure 3C shows postoperative view one year later.

case 4

This thirty-year-old male had considerable X-ray therapy some ten to twelve years ago, as treatment for acne of the face. Over ten treatments were given, the exact amount being unknown. A week prior to his first consultation the tissue became crusted and quite reddened. Figure 4, upper shows the pre-operative condition. On April 2, 1959, the area was widely excised and the defect closed primarily.

The pathologist reported this lesion to be consistent with radiodermatitis of the cheek and, in one section, with Bowen's disease. In two areas there was intra-epithelial carcinomatous change, squamous type. Figure 4, lower, is a postoperative view. This patient must be observed at regular intervals, for in all probability, further breakdown of his tissue will occur.

case 5

This thirty-four-year-old white female developed a tumor in her right breast early in 1952. In September of 1952, a radical mastectomy was performed. After the surgery, extensive radiation was given the chest and axillary area. Subsequently the patient developed radiodermatitis of the chest and an area of necrosis. Figure 5 illustrates her preoperative condition. On June 25, a pedicle flap was outlined; on July 10, a delay procedure was accomplished. Figure 6A shows this stage. On July 24, the flap was migrated to the area of the chest, following wide removal of the radiated area. The donor site was covered with a split-thickness graft. The postoperative view is in figure 6B.

case 6

This patient had radical breast resection, December 9, 1952. Following surgery, extensive X-ray therapy was given to the chest and axillary area, which treatment was completed at the end of January, 1953. Figure 7A shows her preoperative condition. This patient's ulcer, in the axillary area, measured 35 x 80 mm. The scar tissue and damaged tissue covered an area of at least 130 x 160 mm.

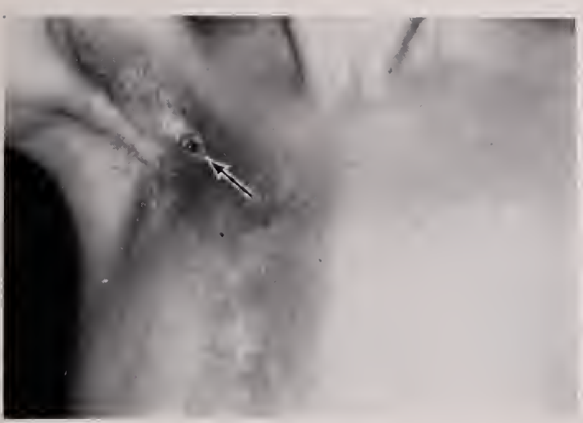

Fig. 5. Case 5. Ulcer following postoperative radiation for cancer of breast.

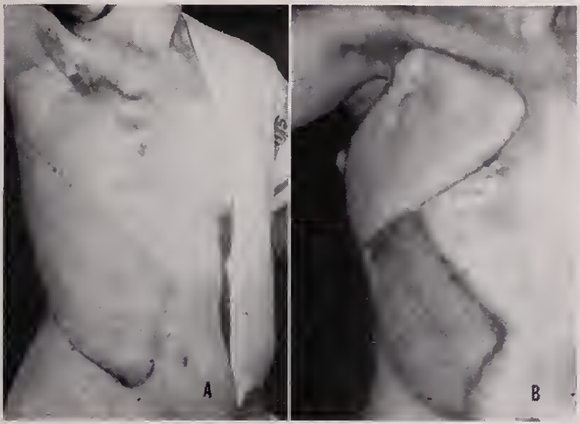

Fig. 6. Case 5. A, after two delay procedures on the flap. B, three months after migration of flap.

The patient's first stage was accomplished on September 11, at which time a pedicle flap was outlined, as shown in figure 7B. On August 28, a further delay was performed in order to insure adequate blood supply. Figure 8 shows the patient's condition following the two delay procedures.

On January 28, this patient was taken to surgery for complete undermining of the entire flap and further division of several areas. A further undermining delay was accomplished on February 15, in order to increase the blood supply. Each time the surgery was stopped when it appeared to jeopardize circulation.

Figure 9, taken March 1, 1954, shows the damage to the flap. It had not been migrated, and shows a beginning loss of the distal end of the flap. This flap was not usable. It was discarded, and eventually the entire chest area of necrosis was excised and covered with a split-thickness skin graft. Figure 10 shows her final condition. This is a poor result, due to failure of the flap.

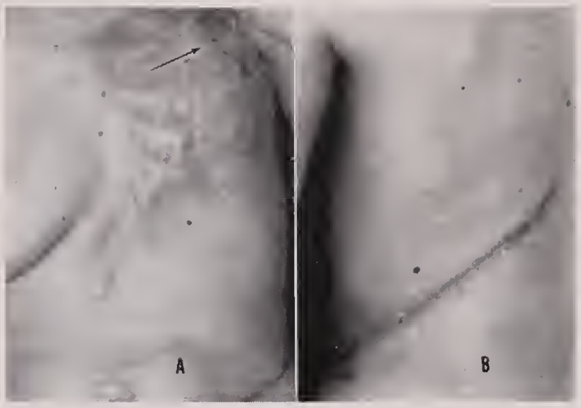

Fig. 7. Case 6. Another ulcer following surgery and irradiation for cancer. B, after first step in construction of flap.

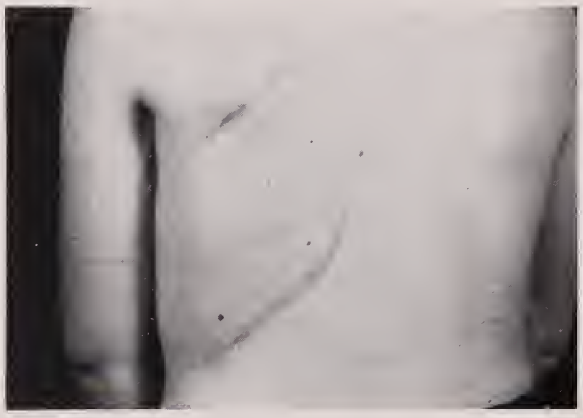

Fig. 8. Case 6. The flap after two delay procedures.

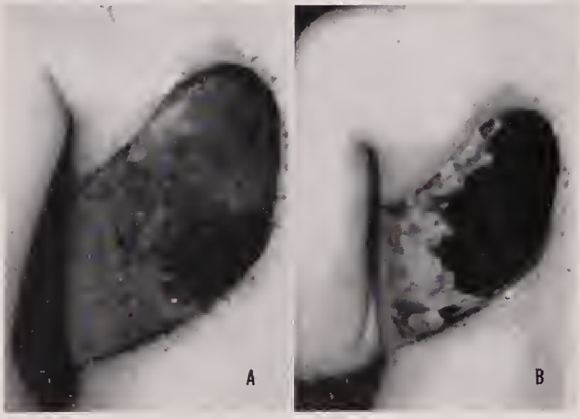

Fig. 9. Case 6. A, the flap has begun to deteriorate. B, the flap is unusable and is a total loss. Circulation has been impaired over a wide area by radiation reaction.

This patient illustrates the great care that must be taken in attempting to migrate flaps in areas even adjacent to radiated tissue. Certainly the amount of radiation has damaged not only the anterior chest area, but the skin posteriorly, proving that vascular changes are present in the skin neighboring an area of radio-

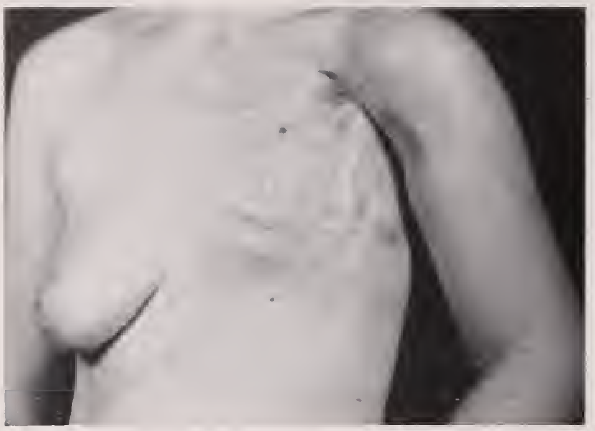

Fig. 10. Case 6. Final result.

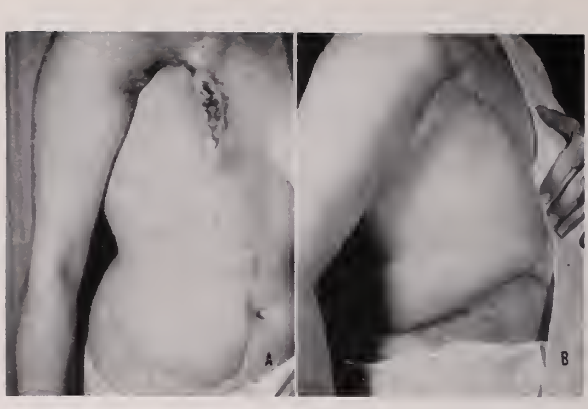

Fig. 11. Case 7. A, the flap after two delay procedures. B, after removal of lesion and rotation of flap.

dermatitis, even that at considerable distance from the treated area.

case 7

This patient had similar history, having carcinoma of the breast on the right, with radical mastectomy followed by extensive radiation therapy. She had a large pedicle flap, previously delayed on two occasions. On June 5, 1953, the flap was migrated into the area of the chest wall following excision of the necrotic and radiated tissue. Figure 11A shows the problem. Figure 11B shows the flap after it had been rotated into position. You will notice that this is an extremely large flap with a rather broad pedicle. The donor site was covered with split-thickness skin graft.

conclusion

It is one of the unfortunate effects of radiation that basal cell epitheliomata of the face are much more apt to persist, despite radical excision, if previous radiation has been given.[5] Therefore, in most instances, wide surgical excision with an opportunity to study microscopically the carefully localized specimen of tissue removed, is far preferable to irradiation with uncertainty of elimination of the disease.[5] One cannot condemn too strongly the practice of using radiotherapy to skin lesions without adequate biopsy. The word *adequate* does not mean a small snip or punch specimen. It is unfair to ask the pathologist for an accurate diagnosis with only part of a lesion. Total, excisional biopsy is always preferable. The treatment of choice of both radiodermatitis and malignant change is wide excision, followed by primary closure, a free skin graft, or a pedicle graft. The greatest problems created by overradiation are encountered in deformities secondary to retardation of growth and in changes due to cumulative or latent effects of radiation.

Cowan estimated that "a square mile of surface soil one foot thick contains an average of one gram of radium, three tons of uranium, and six tons of thorium. The combined effect of this natural radioactivity plus that released by man-made nuclear energy may eventually exceed man's powers and harmfully hurt his embryo, fertility, and body tissues in a not-too-remote time. In consequence, we can expect not a lessening, but an increase in the number and complexity of radiation problems."[9] ■

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Tranquilizers or Transcendentalism?

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Several medical journals recently published an advertisement for a pharmaceutical company which quoted Abuslih-ud-Din Saadi as having written:

> If of thy mortal goods thou art bereft,
> and from thy slender store two loaves
> alone to thee are left,
> Sell one, and with the dole
> Buy Hyacinths to feed thy soul.

Although it undoubtedly sold tranquilizers, this beautiful poetic expression of the not by bread alone concept also suggests the possibility that our society might do well to cultivate its hyacinths. This is particularly true in view of the present controversy concerning the concepts of freedom and equality in society, a controversy in which the philosophy of medical practice is most certainly involved.

To some extent there is lack of understanding of the discussion due to conceptual differences in the meanings of terms. For example, to all proponents of democracy the term *democracy* does not have the same meaning; even Lenin claimed it as the essential form for freedom.[1] Similarly, there are conceptual differences regarding the meaning of *freedom* and *equality*. Does freedom mean individual freedom or collective freedom? Does equality mean that each individual should be treated equally under law, or is the strict economic connotation implied in the idea of distributive justice the prime meaning? Within the various conceptions of these terms and the philosophies implied by them, are found the sources of the current conflict.

the point at issue

For the most part, the philosophical disagreements do not appear to be concentrated on the desirable ends which are generally felt to be the legitimate aims of society, but rather on the means to attain these ends. World population has been divided between two poles of the controversy. Currently, the discussion is in progress in the schools, churches, and political institutions of our nation. American political thought, which at one time was more homogeneous, is seeking its own polarization. That part of the discussion which includes medical care has for the moment been swept into an eddy but still lies close to the main current of the controversy.

two kinds of freedom

There have been numerous recent attacks on the political philosophies which derive their major support from, or originate with, men of the eighteenth and nineteenth centuries. Such viewpoints are held to be antiquated or old-fashioned. In considering this attitude, Weaver states that "The most vocal part of modern impiety is the freely expressed contempt for the past."[2] It is of interest that proponents of *both* sides of the argument must go to the same historical period for the roots of their ideas. It is these origins that must be examined if we are to understand the current problem, for we are confronted with two conflicting democratic concepts; one which emphasizes a freedom of the circumstantial variety, and one which advocates the egalitarianism of distributive justice.

Certainly the basic ideas inherent in these two concepts were not new in the eighteenth century, since they were subjects of discussion in Greece and Rome. They have, however, been given impetus by philosophers of the past two centuries. The first of these concepts began its ascendancy in Scotland and England where its supporters included such men as Hume, Smith, and Burke. A few continental authors, among whom were Montesquieu and de Tocqueville, belong to the same group. Their philosophy was essentially empirical. They could not accept the idea that man designed society and its social institutions by pure reason. They felt that our social superstructure arose, not by design, but by a process of cumulative growth and adaptive evolution. Social development was essentially a slow growth by trial and error. It was the "survival of the successful"[3] in institutions and ideas by a process of selection in which society chose and perpetuated those which were of proved value. Thus, to these philosophers, morals, laws, language, and political institutions evolve by gradual and spontaneous growth, and portray in their development a summation of human experience.

governmental interference should be limited

Since these men believed in social development as a spontaneous and undesigned growth, it is to be expected that they would support the idea of circumstantial freedom. Adler places many of these evolutionists within the group which he classifies as advocates of a circumstantial freedom of self-realization. He defines this freedom as an

> Individual's ability to act as he wishes for the sake of the good as he sees it. Since being able to carry out one's wishes in overt action depends, at least in part, on favorable external circumstances, the freedom of self-realization is always a circumstantial freedom.[4]

Based on this concept of freedom, it became the pattern of thinking for the empirical group that governmental interference with individual action should be limited and that lack of such limitation meant absolutism or aristocracy.

One might also anticipate the derivation of the classical economic concepts of Adam Smith from a belief in spontaneous evolutionary social growth and circumstantial freedom. Smith's assertion that men who are to a great extent unrestricted in their economic activities are led by an invisible hand to promote not only their own, but the interests of society as well, supports the idea of spontaneous economic growth and development. His opposition to the circumstantial restriction on man's economic freedom is characterized by the statement,

> The statesman who should attempt to direct private people in what manner they ought to employ their capitals would not only load himself with a most unnecessary attention, but assume an authority which could safely be trusted, not only to no single person, but to no council or senate whatever, and which would nowhere be so dangerous as in the hands of a man who had folly and presumption enough to fancy himself fit to exercise it.[5]

trial and error

Within society as envisaged by the empiricists the rules of conduct are not fashioned synthetically but are developed in the light of human experience, trial, and error. In a general way, individual acts tend to promote the public interest and where individual conflicts arise these are resolved in the development of social institutions, laws, and morals. It is respect for the ideas derived from this process, and which are traditional in our society, which gives morality to individual acts and political concepts. Hayek states that "the most important among the few principles of this kind that we have developed is individual freedom which it is most appropriate to regard as a moral principle of political action."[3] Thus politically expedient acts carried out with no regard for their ultimate effect on the idea of individual freedom lack morality. Maritain describes this as the moral rationalization of politics.[6]

The utilization of reason is not rejected by the empiricists, but it is their belief that it is most beneficially used in the preservation of a social milieu which allows a continued freedom of evolutionary development.

the empirical view

With the previous discussion in mind, one can summarize the position of the men who defend one side of the present controversy as a belief in:

1) Spontaneous social evolution;
2) Individual pre-eminince and a freedom of circumstantial self realization;
3) A concept of liberty which supports moral principles as opposed to expediency in political action;
4) Classical economics, and
5) The utilization of reason, not for the purpose of designing society or creating moral concepts, but for the preservation of an unrestricted evolutionary social development.

the rationalists' view

The opposing concept is found to root chiefly in Europe in the philosophy of Rousseau, Condorcet, and others. Hobbes, an Englishman, is included in this group for his belief in the rational design of the social contract and an authoritarian system of government.

There were differences of opinion among those individuals who supported the empirical viewpoint. There were also individual differences among the opposing group, but in a general way this group believed that individuals seek freedom in the organization of society and government and that the essence of freedom lies in the attainment of the collective purposes of society. To them, man is naturally intelligent and good, and possesses the necessary moral and intellectual faculties that enable him to fashion civilization deliberately or to control the direction of its development. Thus it is quite possible for this group to believe in the feasibility of designing and creating a utopian society using reason.

The various supporters of the rationalist viewpoint accept various concepts of freedom. Hobbes and Rousseau, among others, are supporters of the concept of circumstantial freedom. Comte, Marx, and Engels represent those who believe in a collective freedom. Since to this latter group man exists only in society, he is regarded only as a part of a social organization. When man, collectively, perfects society so as to eliminate its defects and inequities, and so as to conform to the laws of nature, then society acquires collective freedom. Adler summarized the concept of collective freedom as follows:

> ***collective freedom is acquired with a use of knowledge that enables mankind to govern itself in accordance with necessity. The following additional facts must be noted: (a) That the freedom accrues to individuals only where it is acquired by mankind; (b) That it is acquired through the perfecting of human association rather than through the moral development of the individual in any social context; (c) That the laws with which liberated society are in harmony are the scientific formulation of how things do behave, rather than theologically, morally, or juridically declared rules of how man should behave; (d) That such laws are inviolable, and, therefore, can be put to beneficial use or not, but never disobeyed, in contrast to ethical prescriptions which are violable and may or may not be voluntarily obeyed.[4]

For these rationalists who do not specifically support the idea of collective freedom, the economic status of the individual is often seen as one of the primary limiting or enabling factors in a concept of circumstantial freedom. Rousseau suggests that the social conventions that have developed in history having to do with the concept of property ownership are the chief sources of inequality.[7] It is an extension of this idea that places most of the rationalists in the position of favoring economic equality. For them, justice means an equal share of man's product, regardless of the value of the individual to society. Consequently, many of the rationalists propose the organization of society along lines that assure equality of distribution.

the origin of bureaucracy

The modern derivation of the rationalist idea carries the connotation of organization in government for collective purposes. As such, it tends to accelerate the decline of law as a moral concept and the rise of administrative regulation in accordance with immediate need. Ideally, it envisages the collective concept of freedom, but because the "inviolable laws" of social relationships are as yet unknown, mankind has not reached that stage of social perfection which is absolutely required for the success of the collective concept. As a result, attempts to create such governmental organizations invariably degenerate into governments of bureaucratic or totalitarian form.

The conflict, then, is not strictly a conflict between freedom and equality. More precisely, it involves conflicts between individual freedom as opposed to collective freedom, and equality of opportunity as opposed to economic equality.

foundation of medical philosophy

Although the preceding discussion represents an over simplification of the existing conflict, it should be sufficient to permit a more accurate focus on the position of current medical philosophy. The time involved in the development of the moral and ethical basis of medicine precludes the possibility of any degree of rational planning. We must concede that medicine has followed the empirical or evolutionary course in its development. The philosophy of medicine, then, does not rest on a foundation which can be affirmed by rational or scientific analysis, but much like our legal and religious concepts, has its basis in a traditional morality preserved and developed through centuries of trial and error. Some of the social forms through which this morality finds expression are our hospitals, medical schools, interprofessional relationships, personal relations with patients, and the economic forms of medical practice. As such, they form an important part of the superstructure of our society.

Medical philosophy, and the strength of its moral and ethical foundations, present to the modern rationalist one of the strongest areas of resistance against the development of the rationalist idea of social planning. In view of the advances made by rationalist philosophy in political areas, it is not surprising to find medicine in a defensive position, its social forms, and especially its economic form under attack. The egalatarian economics of the rationalist must include all social services, and health care is not exempt. The opportunist who may be unaware of the underlying philosophical conflict will find in this situation an emotional appeal to voters which serves as a political expedient. Those who support the egalitarian idea are praised as *progressive* and *humanitarian*, while those who cling to the traditional forms are often described as *having no feeling, anti-humanitarian,* and *old fashioned.* The traditional morality which they support is said to originate in myths and superstitions.

non-production

The concept of economic equality (aside from political equality) implies the necessity of regulative governmental organization to control production and equalize distribution of the total product. Someone must decide what is to be produced and how much of each item is needed. There must be agencies to carry out this function as well as that of distribution. Very little imagination is required to visualize the magnitude of the organization necessary. One can imagine the economic drain imposed on society by the necessity for maintaining a large bureaucracy which is inherently non-productive of any material values. If material gain is one of the criteria of human progress, one could predict a retarding effect from this cause alone, since capital used in non-productive efforts does nothing to enrich society materially.

The organizational structure necessary for effecting economic equality would indeed be a danger to freedom, as our society understands it. Such organizations have an inherent tendency for growth as pointed out by Parkinson.[8] The danger lies in the fact that through growth such an organization may become politically powerful and, while acting as a self-perpetuating faction, escape the concept of limited government and become a bureaucratic tyranny governing by administrative regulation with no regard for law. The following quotation from Spencer's analysis of English society in the late 19th century is particularly applicable to the American scene and serves to illustrate the fact that we are not the first to have traveled this particular road:

> See, then, the many concurrent causes which now threaten continually to accelerate the transformation caused by following precedents, which become the more authoritative the further the policy is carried. There is that increasing need for administrative compulsions and restraints which results from the unforseen evils and shortcomings of preceding compulsions and restraints. Moreover, every additional State-interference strengthens the tacit assumption that it is the duty of the State to deal with all evils and secure all benefits. Increasing power of growing administrative organization is accompanied by decreasing power of the rest of the society to resist its further growth and control. The multiplication of careers opened by a developing bureaucracy tempts members of the classes regulated by it to favor its extension, as adding to the chances of safe and respectable places for their relatives. The people at large, led to look on benefits received through public agencies as gratis benefits, have their hopes continually excited by the prospects of more. A spreading education, furthering the diffusion of pleasing errors rather than of stern truths, renders such hopes both stronger and more general. Worse still, such hopes are ministered to by candidates for public choice, to augment their chances of success; and leading statesmen, in pursuit of party ends, bid for popular favour by countenancing them. Getting repeated justification from new laws harmonizing with their doctrines, political enthusiasts and unwise philanthropists push their agitations with growing confidence and success. Journalism, ever responsive to popular opinion, daily strengthens it by giving it voice; while counter-opinion, more and more discouraged, finds little utterance.[9]

the origin of mediocrity

The greatest deficiency imposed by the necessity of organization in collective efforts is related to the collective attitude or state of mind. Freud, in discussing and enlarging on the opinions of LeBon and others, makes some interesting observations.[10] According to these men, the individual as part of a group loses his individual distinctiveness and develops an average character along with a decrease in individual responsibility. He becomes "an automaton who has ceased to be guided by his will."

The collective group tends to be impulsive, it lacks critical faculties and is unusually credulous; it tends to go to extremes, and resists innovations and advances. From these particular characteristics of the individual as a member of a group, and of the group itself, one can readily understand how the imposition of such a system may lead to collective mediocrity. The only escape from a general lowering of intellectual levels is to take the intellectual obligations away from the group and assign them to individual members. This solution creates a threat to freedom as it could well give rise to an authoritarian intellectual elite similar to that proposed by Comte.[11]

In contrast to a static society, limited in its intellectual capacity and ability to progress by the mediocrity inherent in collectivism, one notes the historical evidence of rapidity of progress and a high degree of material affluence in those societies where individual effort and creativeness are rewarded. The history of the United States serves as an example of this. It is not so frequently the planned effort as the spontaneity of ideas arising from individuals that produces social gains. The equal distribution of the products of society, enforced by regulation, suppresses the utilization of this spontaneity because the system of rewards is not based on the value which the individual renders to society. Material progress in society is a function of individual freedom in economic as well as political spheres and demands equality of opportunity as the means of its development.

socialization of two professions

A recent publication has suggested a parallel between the collectivization of our educational system and trends in medical care.[12] One can agree with the author that the voluntary collectivization which has been developing in medicine has been good, especially in those areas where complex technical systems and team concepts are necessary. It would be much more difficult to obtain agreement that the collective effort in education has been predominantly beneficial. If beneficial, it may well owe its success to the restrictions placed upon its collectivization by the confining of authority to small political units. Should our educational system be subjected to the nationalization with which it is currently threatened, the results may well be different. We may discover with Mill that "A general state education is a mere contrivance for molding people to be exactly like one another——."[13] In the past few years many able critics have pointed to what they interpreted as collective mediocrity in our educational system. Just as the physician should lead the resistance against collectivization in medicine, the educator should assume the leadership in guarding against the possibility of the educational system developing into a mold for political conformity.

supporting an erroneous concept

The fragmentation and degeneration of traditional forms in such cultural expressions as art, music, poetry, and literature, along with an increasing lack of concern for law in our society, suggests the possibility that traditional medical philosophy may not be able to withstand the general decline in morality. In the light of the philosophical controversy, it will be seen that the support of such expediencies as the Kerr-Mills program and voluntary health insurance is useless, if not irrational. In the first instance organized medicine finds itself presently in the unenviable position of supporting that sort of social action which traditional morality demands that it reject. There is no real recognition of the problem as an idealogical conflict. A false insight and a yielding to its own humanitarianism in the solution of economic problems forces medicine to follow the expedient course. The economic problems which medicine faces are not the *cause* of any ideological conflict, but the *result* of it. Consequently, solutions based on alleviation of the economic problem as a cause, per se, serve only to increase the complexity of the problem. This is compounded by the use and support of economic solutions (Kerr-Mills) which are inherently collectivistic.

An examination of the voluntary health insurance facet yields a similar interesting paradox. Organized medicine supports private health insurance because such plans are voluntary. However, in its preoccupation with economics as a root cause, medicine frequently finds itself in the position of offering such plans as a method of relieving the economic pressures created by lack of means to purchase medical care.

Admittedly, voluntary health insurance has a value in that it serves to protect the individual against an overwhelming loss due to an unusually severe illness or accident. This is its only value. When the individual joins a group medical plan, it is not his individual medical costs, but the medical costs of the collective group that are significant. The amount of medical care which can be purchased for each dollar expended on a private health insurance plan is reduced by the exact amount (10 to 20 per cent) which is held by the insurance company as a retention for operational expenses, taxes, and profit. It is this amount which purchases the group protection value previously mentioned. In effect, this adds an additional cost factor and the net result is an aggravation of the economic problem which confronts us.

the road ahead

Assuming that the medical profession wishes to protect and maintain the moral basis in its philosophy, the only appropriate defense against modern rationalism is total resistance to changes in the direction of collectivization. Although this has been frequently described as a negative approach, medicine must work within its limitations for no other solution coincides with traditional medical philosophy. There is no room for compromise.

If, by contrast, medicine chooses to follow its present course of partial acceptance and open support of the rationalist viewpoint, then much of the individual, personal meaningfulness of medical practice will be sacrificed to the collectivist idea.

The medical profession will need to look beyond the immediate needs of our generation to determine its position with relation to the basic controversy. We cannot hope that like the gingham dog and the calico cat, the two opposing ideas will eat each other up, but time may well effect changes in social concepts that will allow resolution of the problem. As Huxley suggests, "——we have been merely men for perhaps a tenth of a million years, one tick of evolution's clock."[14] ■

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Choline Salicylate in Pediatric Practice

Trial of a New Soluble Analgesic

JAMES A. TUPPER, M.D. Seattle, Washington

Pediatricians value aspirin as an analgesic and antipyretic agent, but recognize certain difficulties with it. Its relative insolubility presents problems of administration to infants and very young children, and perhaps a fifth to a tenth of these patients suffer gastrointestinal upset following aspirin ingestion.

These difficulties with aspirin would appear to be due to its poor solubility in water and its acidity, reported to be responsible in some cases for inflammation of the gastric mucosa[1]. Buffered aspirin has not succeeded in eliminating these effects of the unbuffered product[2]. Hence a preparation which would be readily soluble and of lower acidity than aspirin, yet retaining the therapeutic value of the salicylates, would be highly useful in pediatric practice. The literature suggests that a recently-synthesized compound, choline salicylate, may possess the desired properties[3-6].

The preparation, combining the strongly basic choline ion with salicylic acid, is reported to be far less acidic than aspirin, its pH being 6.5. It is also said to be the most water-soluble of the salicylates, and can be maintained only in aqueous solution. This solubility reportedly permits far more rapid absorption than does aspirin, hence is likely to cause more rapid response[7-8]. Rapid absorption, and stability of the compound in water, prevent conversion to salicylic acid in the stomach. This reportedly avoids the gastrointestinal difficulties at times associated with aspirin.

clinical trial

Thirty-nine infants and young children with a variety of pathologic disorders causing fever, or pain, or both, were treated with choline salicylate. The age range of these patients was 4½ months to 4 years; nine were less than 6 months old, 25 less than a year old, and the average was 14½ months. Twenty-seven had fever, with temperature going as high as 104F in one case. The average temperature for the 27 patients with fever was 101.7F. Diagnoses for these 39 patients are listed in table 1.

Table 1, Diagnoses, 39 patients

Tonsillitis and upper respiratory infection	11
Immunization reactions, no fever	9
Immunization, with fever	5
Teething, with fever	5
Teething, with immunization reactions	3
Otitis media	4
Insomnia	1
Fever of unknown origin	1

In all cases I took the temperature at the time of the house visit, and administered the first dose of the oral preparation with the aid of a dropper. Parents were instructed to take temperatures one-and one-half, four and eight hours after initial administration and to report the results by phone. Dosages prescribed ranged from half a dropperful every 4 hours to two dropperfuls every 4 hours, depending chiefly on age. In the great majority of cases, the dosage was one dropperful, which contained 0.6 cc. of the preparation (105 mg. of choline salicylate, or the equivalent of 1.25 gr. aspirin).

I had treated patients in the study, with aspirin, on previous occasion. I was familiar with their individual responses to this medication. This, together with my general experience among patients of similar age and pathological condition, served as a subjective control in evaluating the effect of the medication. Where the response was rapid and effective, in general more so than would be expected with aspirin, it was evaluated as Excellent (E); where it was effective, but only slightly better or about the same as aspirin, it was evaluated as Good (G); where the response appeared to be generally less effective than aspirin, it was evaluated as Poor (P).

Table 2. Antipyretic Effect of Choline Salicylate Patients, Age from 4½ Months to 4 Years

Temperature Readings	More than 103F	102.2F to 103F	101.2F to 102F	100F to 101F	Normal
Initial	1	8	5	13	12
At 1-1/2 hours	0	1	0	11	27
At 4 hours	0	0	0	1	38
At 8 hours	0	0	0	0	39

results

The antipyretic effects are given in Table 2. At the 1½ hour reading, temperatures had dropped in every one of the 27 patients with fever. Fifteen of these 27 were down to normal, and in only one patient was the temperature above 101F as against 14 initially. In 13 cases, the temperature decline was more than 2 degrees and in the other 14 cases it was between 1 and 2 degrees. The average decline in these 27 cases was 2.2 degrees 90 minutes after the medication was ingested.

At the 4 hour reading, all temperatures were down to normal except that of the patient who initially had a temperature of 104F. This was a nine-month old boy with an upper respiratory infection and an immunization reaction. At 4 hours, his temperature had dropped to 100F; at 8 hours it was normal, as were those of all other patients in the study. The average decline in temperature of all 27 patients with initial elevated readings was 3 degrees at the 8-hour reading.

Table 3. Response to Choline Salicylate Administration, 39 Infants and Young Children

Diagnosis	Total Pts.	Results E	G	P	Compared with Aspirin B	S	W
Tonsillitis and U.R.I.	11	4	5	2	6	3	2
Immunization reactions	14	7	7	-	9	4	1
Teething	5	4	1	-	5	-	-
Teething and immunization reactions	3	2	1	-	1	2	-
Otitis media	4	3	-	1	3	-	1
Insomnia (sedation)	1	1	-	-	1	-	-
Fever of unknown origin	1	1	-	-	1	-	-
Totals	39	22	14	3	26	9	4

* E—Excellent B—Better
G—Good S—the same
P—Poor W—Worse

The analgesic effects of the preparation under study appeared to be equally rapid, according to parent reports. On the basis of both temperature declines and parent reaction to efectiveness of the medication, patient response was adjudged

Excellent in 56 per cent of the cases under study and Good in 36 per cent (Table 3). Though the preparation was actually effective in all cases, it appeared to be less so than aspirin for four patients. In one of these, the response was nonetheless considered sufficiently effective to be adjudged Good. In the other three, it was evaluated as Poor.

There was a single case of gastrointestinal upset. The child with the initial temperature of 104F vomited the first administration of the medication. It was not possible to determine whether this was due to the medication or to the condition for which it was prescribed.

In all other cases, the medication was administered without difficulty and acceptance was uneventful.

comment

Though this was not a controlled study, it involved a routine series of pediatric patients all of whom had been under the care of the investigator virtually from birth. On the basis of this familiarity with the patients, there appeared to be little question that choline salicylate possesses the therapeutic efficacy of the salicylates, acts more rapidly than aspirin, is more easily administered, and is virtually free from side effects.

Where aspirin customarily brings temperature into normal range in eight hours to as much as 72 hours, in this study choline salicylate brought all temperatures to normal within eight hours. As every pediatrician knows, where infants and young children are concerned, part of the therapeutic process embraces the subjective response of parents. Here, too, the result favored the new salicylate preparation, with a substantial number of parents enthusiastic over the rapidity of response and ease of administration.

summary and conclusions

1. A new salicylate compound in liquid form, choline salicylate*, was tested clinically among 39 infants and young children for antipyretic and analgesic efficacy, as well as for side effects. Patients involved ranged in age from 4½ months to 4 years and had a variety of illnesses accompanied by fever, pain, or both.

2. The preparation reduced to normal the temperatures of all 27 febrile patients in less than eight hours, with an average decline of 3 degrees. All but one of the 27 was in normal range within four hours after ingestion.

3. Based on its antipyretic action and on parent reports of its apparent analgesic effectiveness, response to the medication was adjudged Excellent or Good in 92 per cent of the patients. The response was more rapid and effective among two-thirds of the patients than was previously obtained among the same patients with aspirin; it was about as effective in 23 per cent, and less effective in 10 per cent.

4. The only side-effect was vomiting in one patient, though it could not be determined whether this was attributable to the medication.

5. The preparation possesses the therapeutic effectiveness of salicylates, while its solubility in water and lack of acidity appear to result in more rapid absorption, greater ease of administration and fewer gastrointestinal upsets than with aspirin. ■

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*Supplied as Actasal Pediatric Drops by The Purdue Frederick Company, New York, N.Y.

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ERRATUM. In the article on a rapid micro bilirubin test, by Small, Wilterdink, and Shurtleff, page 39, in the January issue, there was an error in one of the items under *Reagents and Equipment.* Correct statement is:

Sulfanilic Acid Solution 0.1% in 1.5% Hydrochloric Acid.

Pulmonary Physiology in Clinical Practice

II. Abnormalities of Ventilation

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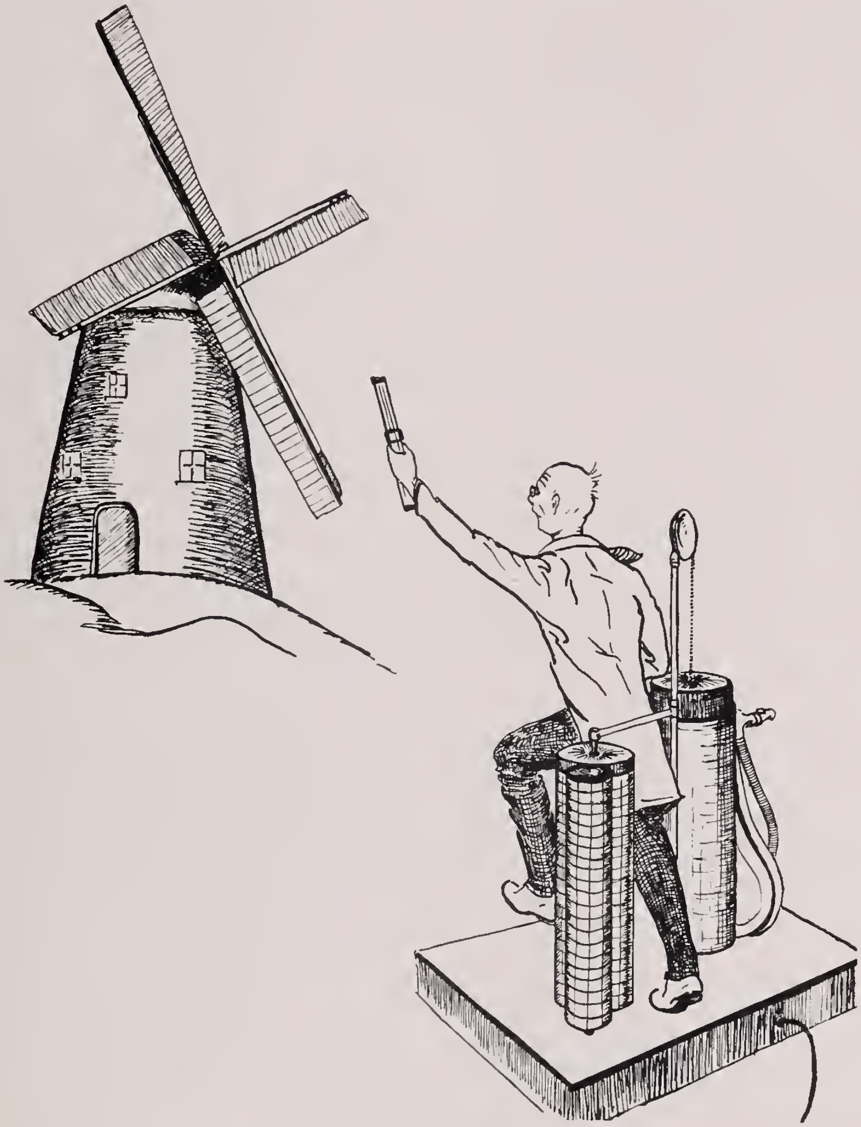

The preceding article of this series introduced concepts of the four causes for pulmonary insufficiency. These are: (1) abnormalities of ventilation (hypoventilation), (2) ventilation-perfusion abnormalities, (3) membrane permeability defects (diffusion impairment), (4) arteriovenous shunts. The present discourse will be concerned with the first of this group, which is most readily accessible to study by clinical methods.

lung volumes

By convention, the total gas content of the breathing lungs is divided into four distinct divisions which do not overlap, referred to as volumes (Fig. 1).[1] These are (1) *tidal volume*—that volume of gas inspired and expired with each normal breath; (2) *inspiratory reserve volume*—the additional amount of gas which can be inspired, over and above the the tidal volume, by

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From The Institute of Respiratory Physiology, Firland Sanatorium, and the Cardio-Pulmonary Laboratory, Providence Hospital, Seattle.

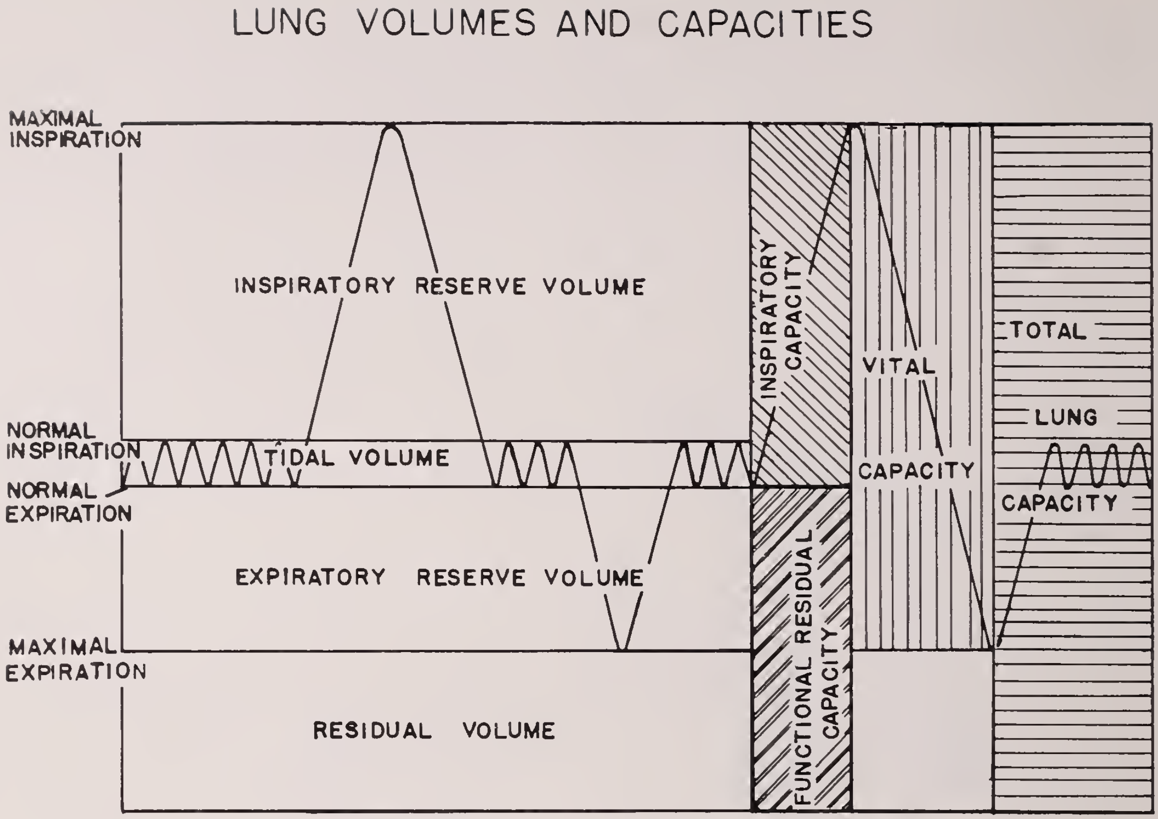

Fig. 1. Relationship of various subdivisions of lung volume.

maximal inspiration; (3) *expiratory reserve volume*—that gas which can yet be expired by forced expiration after completion of a normal expiration, and (4) *residual volume*—that gas remaining in the lungs at the end of forced expiration.

In addition to these divisions, the volume of gas in the lungs is also discussed in terms of four subdivisions called *capacities*, the volumes of which do overlap each other and the lung volumes referred to above. These are: (1) *total lung capacity*, which is the total volume of the lung at maximal inspiration (and which, of course, contains all four lung *volumes*); (2) *vital capacity*, the maximal amount of air which can be expired following maximal inspiration (and which includes the inspiratory reserve volume, tidal volume, and expiratory reserve volume); (3) *inspiratory capacity*, which is the amount of air which can be maximally inspired after completion of normal expiration (and which includes tidal and inspiratory volumes), and (4) the *functional residual capacity*, which is the gas remaining in the lungs at the end of a normal expiration (or the sum of the expiratory reserve and residual volumes).

A reduction of total lung capacity is produced by *restrictive* lung disease. For clinical purposes, measurement of vital capacity is often substituted for that of total lung capacity, on the assumption that the vital capacity and the residual volume are usually affected to a similar degree by restrictive lung disease.

Restrictive defects may result from diseases that deform the bony thorax or limit its mobility. These include kyphoscoliosis, rheumatoid spondylitis, abdominal distension (by tumor, ascites, or ileus), or splinting because of pain in the chest or abdomen. Diseases in which a mass replaces aerated lung (pleural effusion, pneumothorax, atelectasis, pneumonia, or neoplasm) also reduce lung volumes. Diseases that limit the distensibility of the lungs by pulmonary fibrosis, such as occurs in the pneumoconioses (silicosis and asbestosis), the collagen diseases (progressive systemic sclerosis)[2], and interstitial fibrosing pneumonitis, may produce *restrictive* defects.

When measurements indicate reduced lung volumes in a particular patient we assume *restrictive* pulmonary disease to be present *if* (and this is sometimes a big IF) we can be certain that the patient was cooperative with the testing procedure and that his neuromuscular apparatus is intact.

flow rates

Abnormally low flow rates indicate *obstructive* airway disease, provided the patient is cooperative with measurement and has a normal neuromuscular-skeletal bellows system. Flow rates determine the patient's maximal ability to empty and replenish his lung volumes and thus maintain in the alveoli a gas mixture having a high O_2 partial pressure and low CO_2 tension.

Obstructive airway disease occurs in bronchospastic crises (asthma), chronic bronchitis, tuberculosis, the pneumoconioses (silicosis, etc.), byssinosis, and flax worker's malady. "Emphysema" is the late stage of *obstructive* bronchopulmonary disease, characterized by pathologic, anatomic changes.

Because of the pressure relationships within the bronchial airways (Fig. 2), *expiratory flow* is more vulnerable in disease states than is *inspiratory flow.* For this reason expiratory flow rates are most commonly measured clinically.

The simplest such test is the patient's ability to blow out an ordinary book match held six inches from his wide open mouth. The patient who is unable to pass this crude test will very likely be found suffering from far advanced (and probably irreversible) *obstructive* airway disease. Some recent attempts have been made[3], however, to correlate this test with other standardized flow measurements on the basis of determining the greatest distance from the mouth at which the match can be extinguished.

A frequently used clinical measurement of flow rate is the maximal breathing capacity (MBC), also referred to as maximal voluntary ventilation (MVV)[4], which is the maximal amount the patient can ventilate per minute by voluntary hyperventilation.

Timed vital capacity measurements (TVC)[5], and measurement of the flow rate during mid-expiration (maximal mid-expiratory flow rate, or MMEF)[6], are also methods in current clinical usage.

Simpler than any of the above, from the standpoint of equipment and technique, is measurement of maximal expiratory flow rate (MEF) with a simple instrument like the Puffmeter[7] or the Wright Peak Flow Meter.[8] This method provides a readily available readout answer without necessity of lengthy interpretations of tracings produced by a recording pen and kymograph apparatus.

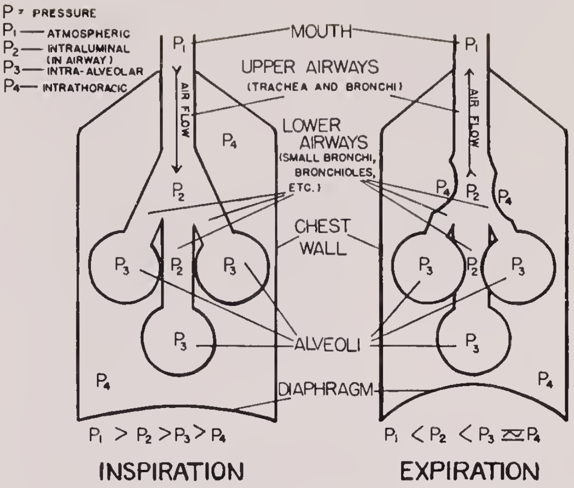

Fig. 2. Pressure relationships in obstructive disease. P_1, P_2, and P_3 represent pressures at three different points along an open tube system through which gas is flowing. Direction of flow always proceeds from higher to lower pressure. During inspiration the pressure difference in the conduits is produced by the negative intra-thoracic pressure (P_4). During expiration direction of flow is reversed by rise in pressure (decrease in negative pressure) at P_4 which is transmitted to the intra-alveolar pressure, P_3. (Because of the ability of the alveolar wall to accommodate to pressure differences between P_3 and P_4 by volume changes, intra-alveolar and intrathoracic pressures are approximately equal during expiration).

Pressures on the outside of the airways (intrathoracic extraluminal pressure, and probably pressure from the alveoli adjacent to the outer walls of the bronchi or bronchioles or both) becomes greater than the pressure inside these tubes during expiration, tending toward collapse and closure at points where the anatomical supporting structure is not firm enough to resist these pressure differences. This is the most probable explanation of the "check valve" mechanism occurring in obstructive bronchopulmonary disease.

dead space ventilation

The efficiency of breathing is impaired by the ever-present volume of used air in the airways which precedes fresh air into the alveoli, (Fig. 3). The only air entering the alveoli which is of use to the body economy is that with gas concentrations different from the mixture of gases already present in the alveoli. Thus, the volume of dead space, the manner of its use, and its distribution in the lung, affect the efficiency of ventilation.[9] *Dead space ventilation* is equal to the volume of the dead space times the respiratory rate.

The volume of the anatomical dead space may be estimated as a number of milliliters equal to the ideal body weight in pounds. It can be measured in the laboratory by monitoring the nitrogen content of a single expirate following a breath of oxygen and simultaneously recording the expired volume with a pneumotachygraph, (Fig.

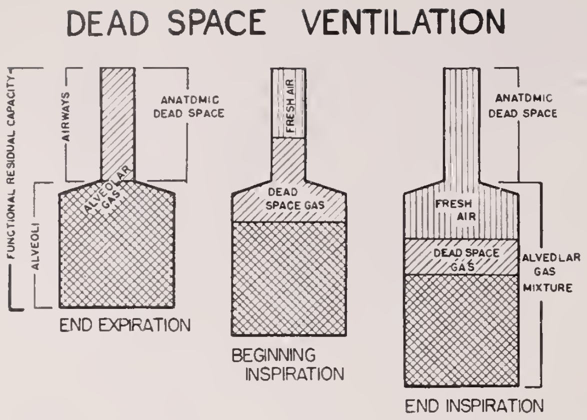

Fig. 3. A somewhat over-simplified representation of the relationship of deadspace to alveolar ventilation. At end expiration the anatomic deadspace is filled with "used" gas from the alveoli, which during the following inspiration is returned to the alveoli ahead of the inspired fresh air. Thus, at end of inspiration the mixture of alveolar gas is made up of the gas which was already in the alveoli at end expiration plus the dead space gas which was in the airways at that time plus the fresh air inhaled during inspiration, minus that amount of air remaining in the airways (anatomic deadspace).

4).[10] This provides a graphic solution of the Bohr equation for dead space volume, a formula using expired volume, and inspired, expired, and alveolar concentrations of any gas.

It is not uncommon for patients with pleurisy, high fever, or hysteria to have rapid, shallow respiration. In these circumstances the volume of dead space ventilation assumes a much larger proportion of the total gas inspired than normally. Such a patient will be actually hypoventilating (from the alveolar ventilation standpoint) while appearing to hyperventilate.

alveolar ventilation

Dead space ventilation equals the volume of the dead space times the respiratory rate per minute. Alveolar ventilation is the amount of fresh air reaching the alveoli for gas exchange during one minute of breathing. Alveolar ventilation is equal to the minute ventilation (total volume of air breathed per minute) minus dead space ventilation. The resting adult should have an alveolar ventilation of 2.0 liters or more per square meter of body surface area per minute. Hypoventilation exists if values are lower.

Hypoventilation occurs in morphine, barbiturate, and certain other drug intoxications. Central nervous system damage from polio, increased intracranial pressure, and other causes, and neuromuscular disorders such as periodic paralysis and myasthenia gravis may be associated with decreased alveolar ventilation, as may such skeletal conditions as multiple fractures and flail chest. Hypoventilation may result when the work of breathing is excessively increased in certain lung diseases, including advanced emphysema. In addition, certain idiopathic hypoventilation states (e.g. Pickwickian syndrome) are sometimes observed.

hyperventilation

Since hyperventilation obviously cannot cause hypoxia or CO_2 retention, it is never a cause of *pulmonary insufficiency*. On the other hand, it is a very frequent cause of *disability* in patients who complain of respiratory symptoms.

Hyperventilation may result from those metabolic states with increased oxygen utilization, such as fever or hyperthyroidism, or may occur as a compensatory mechanism in patients with membrane permeability defects or ventilation-perfusion abnormalities. It is most frequently seen, however, associated with anxiety and emotional disturbance.

In the *hyperventilation syndrome,* increased alveolar ventilation may produce respiratory alkalosis with accompanying symptoms which may include "tightness" or pain in the chest, paresthesias, syncope, and even carpo-pedal spasm. Such symptoms are obviously frightening to the patient, and result in further hyperventilation with greater intensification of the symptoms, developing a vicious cycle, which may only be broken by apnea from the hypocarbic state, or even unconsciousness. These patients frequently present themselves to the physician with complaints of heart pain, shortness of breath, and other symp-

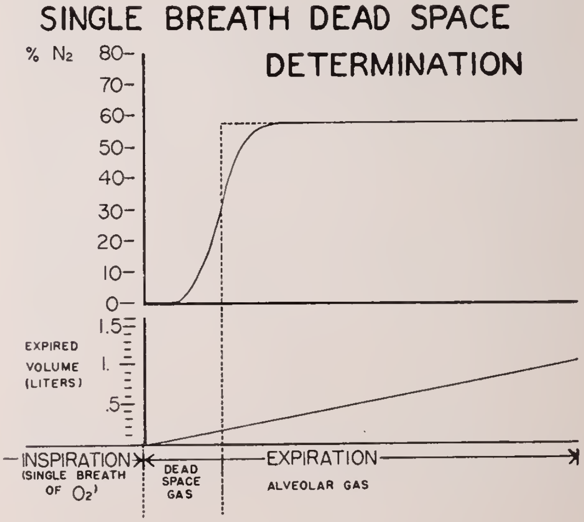

Fig. 4. Determination of dead space from a single breath N_2 curve following breath of O_2.

toms suggestive of organic cardiorespiratory disease.

The *ventilation equivalent* for oxygen is the number of liters of measured ventilation required for each 100 ml. of O_2 uptake, and is normally 2.2 to 2.8 L/100 ml. This value is elevated by hyperventilation from any cause not associated with increased oxygen utilization.

exercise ventilation

The *walking ventilation index* (WVI)[11] relates exercise ventilation to the maximal ability to ventilate, or the maximal breathing capacity, and is one of the best objective measures of dyspnea and *pulmonary disability* known at present. Unless the minute ventilation while walking two miles an hour on the level is less than 35 percent of the MBC the patient will complain of shortness of breath. (This procedure will be discussed further in a future article.)

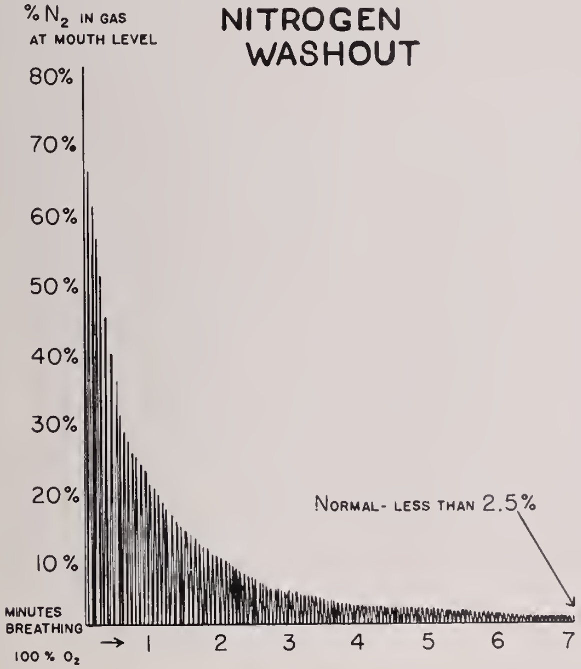

Fig. 5. Recording of continuous measurement of N_2 concentration at mouth level throughout expiration and inspiration while breathing 100 per cent O_2. After seven minutes, normal lungs will have less than 2.5 per cent N_2 remaining in expired gas; persistence of higher N_2 concentration indicates impairment of distribution of gas within the lungs.

distribution of the inspired gas

The uneven distribution[12] of fresh air in the lungs can be measured by the *nitrogen index* or the *nitrogen washout*, (Fig. 5). If some area of lung is poorly distended or has a partially obstructed airway, it will hypoventilate, and while the patient is breathing oxygen the nitrogen concentration in this unit will remain relatively high. The *nitrogen washout* is a measure of this uneven distribution of inspired gas. After breathing 100 percent oxygen for seven minutes the subject with normal lungs should have a nitrogen concentration of less than 2.5 percent of the gas in a forced exhalation. A nitrogen concentration greater than this indicates the presence of poorly ventilated areas.

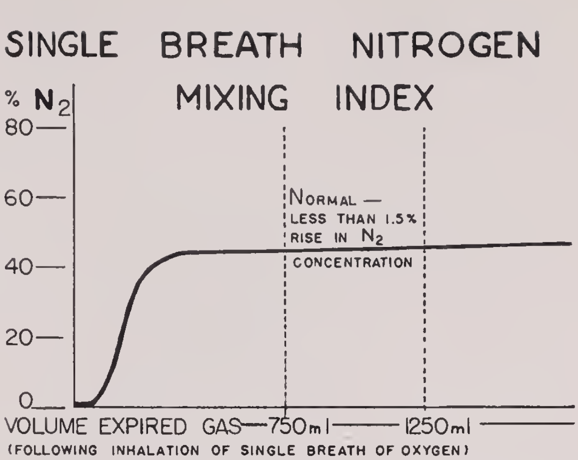

Fig. 6. While there is a gradual rise in the concentration of N_2 in the expired gas throughout a single exhalation (after a breath of O_2), an increase exceeding 1.5 per cent in that portion of the curve between the dotted lines indicates increased non-uniform distribution.

The *nitrogen index*[13] is a single breath test based on the amount of increase occurring in the nitrogen concentration of expired gas (as instantaneously measured at mouth level) between two established points during an expiration following a breath of oxygen, (Fig. 6). The two points are, (1) after exhalation of the first 750 ml, and (2) after exhalation of the next 500 ml. In healthy young adult subjects the N_2 concentration does not increase more than 1.5 per cent during exhalation of this 500 ml of alveolar gas. While this test is simpler to perform than a complete N_2 washout, it underestimates the amount of non-uniformity of gas distribution in the lung.[14]

mechanics of ventilation

All measurements described above depend upon two basic properties: the *compliance* of the individual respiratory unit and the *conductance*, or the patency of the tubes leading to it.

Compliance or distensibility (the reciprocal of *elastance*) is a measure of the ease of filling the respiratory unit. The volume of air entering a respiratory unit is determined by the compliance times the change in filling pressure which is applied. For example, if increasing the pressure at

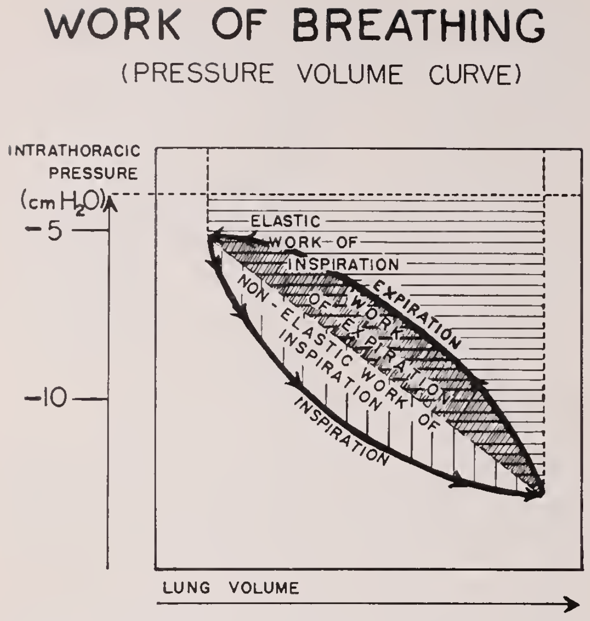

Fig. 7. Heavy black line is graph of the intrathoracic pressures (usually measured with an intra-esophageal balloon) plotted against lung volume during filling (inspiration) and emptying (expiration). Area shaded with horizontal lines represents work done against elastic forces during inspiration. Non-elastic work during inspiration is represented by the area marked with widely spaced vertical lines. Work of expiration is indicated by the diagonally cross-hatched area.

mouth level an amount equal to 5 cm. of water (or, as is normally the case, reducing the intrathoracic pressure to minus 5 cm. of water) produces an inspiration which ads one liter to the pre-inspiratory lung volume, the compliance is said to be 200 ml per cm. of water pressure.

The reciprocal of resistance to air flow in the airways is described as *conductance* and is defined as the change in the flow rate for each cm. of water pressure difference between the two ends of the tube through which the flow occurs. For example, with pressure in the aveoli 5 cm. of water greater than pressure at mouth level during expiration at an instant when expiratory flow rate was measured at 50 liters per minute, one would say the *conductance* was 10 liters per minute per cm. of water. Therefore it follows that the maximal expiratory flow, as well as the resting flow rate, depends upon the conductance of the unit and the pressure applied.[15]

Compliance of a respiratory unit and its conductance or resistance to air flow determine the effort required to fill or empty the unit, or, the *work of breathing*. This may be measured by plotting the changing intrathoracic pressure against the changing lung volume through inspiration and expiration, (Fig. 7). Increased *work of breathing* can be well correlated with the symptom *dyspnea*, which some authors believe to be its subjective sensation.

summary

We have attempted in this chapter to organize and explain the factors in ventilation, the first of the four levels of pulmonary function at which abnormalities may occur. This discussion has included consideration of lung volumes, ventilatory flow rates, dead space, alveolar and exercise ventilation, distribution of gases within the lung, and mechanics of the bellows system. Certain disorders which may affect these factors have been mentioned.

The next article of this series will deal with the three remaining causes of pulmonary insufficiency, and will discuss ventilation-perfusion abnormalities, membrane permeability (diffusion) defects, and arterio-venous shunts. ■

951 Medical-Dental Building (1) (Dr. Pace)

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SECY.-TREAS. *James H. Seacat, M.D., Salem*
EXECUTIVE SECRETARY *Mr. Roscoe Miller, Portland*
annual meeting, September 25-28, 1963, Portland

Board of Trustees Spends Another Busy Saturday

The composition of the Society's headquarters office staff, the medical aid programs of the State Public Welfare Commission, the status of Oregon Physician's Service and the Society's sponsorship of a State Congress on Mental Illness and Health claimed the major attention of the Board of Trustees of the Oregon State Medical Society at its afternoon meeting on Saturday, January 5. The meeting was preceded by a morning-long meeting of the Executive Committee of the Board at which time the annual budget and other matters relating to the Society's administrative affairs were considered.

Upon the recommendation of the Executive Committee, the Board of Trustees adopted the budget for 1963 and a proposal that the Society reorganize its executive staff to create the position of Director of Public Relations, Legislative and Educational Activities and Field Service, to hold the title of Associate Executive Secretary. The proposal included the recommendation that the person employed as Associate Executive Secretary should work with and under the direction of the Executive Secretary and report to the Executive Committee of the Board.

The Board also adopted a recommendation of the Committee on Prepaid Medicine that the resolution presented to the Board at its December 8th meeting proposing that the Society evaluate its sponsorship of Oregon Physicians' Service in the light of the progress which it has made toward meeting its objective be *not* adopted. A second recommendation of the Committee on Prepaid Medicine that periodic evaluations of Oregon Physicians' Service be continued by the Committee and that data and information regarding its status be reported to the membership was likewise adopted.

Alfred C. Hutchinson, Chairman of the Committee on Prepaid Medicine, in his report to the Board, included a comprehensive review of the current status of Oregon Physicians' Service affairs and an evaluation of the progress which has been made during the past three years. The report also contained numerous recommendations of the Committee which it believed would foster continued improvement. One of the major recommendations proposed that the By-laws of the Corporation be amended to provide for more direct participation, on the part of participating physicians, in the election of Trustees.

A resolution directing the Society's Committee on Charitable Medical Care to investigate the budget of the State Public Welfare Commission for its medical aid program during the next biennium was introduced by James H. Seacat. The resolution pointed out that Governor Hatfield's budget for the Public Assistance programs provided for only an insignificant increase in the funds available for physicians' services which did not take into account the probability that an increased case load may develop. In addition to registering a protest against the budgetary allotments, which was determined without consultation with official representatives of the Society, the resolution proposed that the entire problem of utilization of physicians' services be closely studied. It also suggested that the return to prior authorization be considered.

The Committee on Charitable Medical Care had already established Saturday, January 26, as the date for its meeting to consider the resolution as well as other matters relating to the Public Welfare and Medical Assistance for the Aged programs.

Kenneth D. Gaver, Chairman of the Committee on Mental Health, requested approval of the Board of Trustees for Society sponsorship of an Oregon Congress on Mental Illness and Health to be conducted

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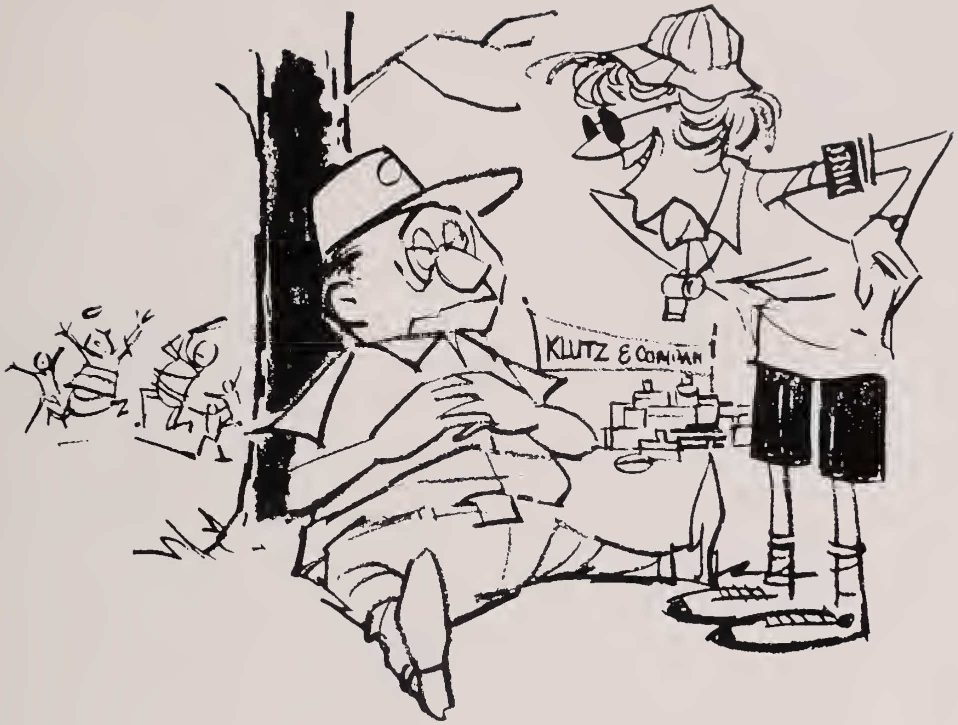

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continued from page 132

in cooperation with the Oregon Academy of General Practice and other official and voluntary agencies and organizations interested in the field of mental health. Dr. Gaver also presented a recommendation of the Committee on Mental Health that the Society underwrite the cost of the Congress but that the Committee be authorized to obtain additional financial assistance through a registration fee and contributions from firms and organizations interested in the field.

The Board of Trustees approved the Committee's recommendation that the Society sponsor the Congress on a cooperative basis as recommended by the Committee but asked that a budget for the Congress be presented at the Board's meeting on Saturday, February 2.

The Board of Trustees also voted to submit the names of Jon V. Straumfjord of Astoria, Raymond M. Reichle of Portland and William J. Pyrch of Oregon City to Governor Hatfield for his consideration in making an appointment to the Oregon State Board of Medical Examiners for a five-year term beginning February 28, 1963. Dr. Straumfjord, who is the incumbent, was appointed to the Board in July of 1958 to fill the vacancy created by the untimely death of Wilmot C. Foster of Portland.

Among the other actions at its January 5th meeting the Board of Trustees:

1. Voted to accept the offer of the Mead-Johnson Laboratories to offer an award of $200 to the physician entering the best scientific exhibit at an annual meeting of the Society.

2. Voted to refer to the component medical societies in Clackamas, Multnomah and Washington Counties a request from Mr. Harry Palmer, Director of the Hospital Survey and Construction Section of the Oregon State Board of Health, that the Society endorse a request being made by a Portland Metropolitan Hospital Planning Council for federal funds to finance its activities for a three-year period beginning July 1, 1963.

The Board of Trustees also heard a report from the Committee on Medical Education regarding a questionnaire to be sent to all physicians in Oregon to obtain information regarding the profession's desires for postgraduate medical education and the quality of the referral service rendered to the physicians of the State by the University of Oregon Medical School and Doernbecher Hospital. The report, which was presented by Herman A. Dickel, Chairman of the Committee stated that the questionnaire had been developed jointly by the Committee on Medical Education of the Society and the Liaison Committee from the faculty of the University of Oregon Medical School. The questionnaire is to be mailed with two accompanying letters explaining the purposes of the questionnaire and urging full cooperation from physicians. The first letter will be over the signatures of David W. E. Baird, Dean of the School, and Melvin W. Breese, President of the Society. The second letter is to be signed by Dr. Dickel and Charles N. Holman, Associate Dean.

Prompt Completion and Mailing of Death Certificates Requested

Note: Some physicians have followed the practice of delaying the signing and mailing of death certificates until an accurate cause of death has been established. This delay, on occasion, has placed survivors at a disadvantage in determining personal and property rights. The Oregon State Board of Health calls this fact to the attention of the physicians of the State and suggests that when the actual cause of death is in question the *probable cause* be entered and the certificate mailed within the three-day period. Should there be a change, the Board will accept an amended report. The following text, prepared by the State Board of Health, discusses this subject in greater detail.

> **The vital statistics section of the Oregon State Board of Health reminds all physicians that their prompt attention and cooperation is requested in certifying and signing the medical certification of the death certificate.**
>
> **The law provides that the funeral director must file the completed certificate within three days after death. Obviously this cannot be accomplished until the signature of the attending physician has been obtained. This means that in most cases the certificate must be signed based on information and medical records available at the time of death and without waiting for results of post mortem examination. While the Board is vitally interested in obtaining accurate statistics, it must be remembered that these records serve as a basis for establishing numerous personal and property rights of survivors. Delays in filing the certificate can, and do, result in loss and serious inconvenience to the parties involved.**
>
> **Should post mortem examination result in significant changes in the diagnosis reported on the death certificate, it is recommended and hoped that the attending physician will make a supplemental report to the Board amending the record. At the time of signing the death certificate the certifying physician may wish to qualify his report with an indication that more specific data will be available from autopsy. For example, a statement such as "Probable coronary thrombosis—pending autopsy results," is quite acceptable. Under these conditions, the vital statistics office will initiate a query to the physician at a somewhat later date asking if he wishes to supplement or amend the original statement as to cause of death. The vital statistics section of the Board of Health will be happy to answer any questions regarding these procedures.**

Roberts is new chief at Morningside

Albert G. Roberts, formerly a member of the staff at Morningside Hospital, has returned to Portland from Middletown, Connecticut, to become Morningside's medical director. He replaces James F. Carlin, who goes to Gorgas Hospital, Canal Zone.

ALBERT G. ROBERTS, M.D.

Dr. Roberts received his medical degree from the Welsh National School of Medicine, at Cardiff, Wales, in 1953. He holds a degree in anthropology also and is concerned with socio-anthropologic aspects of psychiatry. He came to this country in 1957 and has served in various capacities in psychiatric hospitals in Petersburg, Virginia, as well as in Middletown and Portland. He is a member of a number of professional societies, in this country and in England.

Lane County Society

January meeting of the Lane County Medical Society was held in the Village Green Room of the Eugene Hotel, Tuesday, January 8. The program was devoted to various aspects of mental health. Speakers were from the Oregon State Hospital and University of Oregon Medical School.

Conference on chest diseases to be held at the Village Green Motel, Cottage Grove, February 22-23, was announced.

DR. JOHN JERGUN GRABOW, *50, died at Sutherlin of acute myocarditis and diabetes, September 11. He was a 1938 graduate of Creighton University School of Medicine, Omaha, and had practiced in Sutherlin for 17 years.*

DR. GUY MOUNT, *founder and operator of Oregon City Hospital, died October 13, of arteriosclerotic heart disease and diabetes. He was 80. He was born in Silverton, October 26, 1881, and graduated from the University of Oregon before entering medical school. He received his medical degree from Columbia University College of Physicians and Surgeons in 1911 and opened his practice in Oregon City with his brother, the late Hugh S. Mount, in 1912.*

DR. ERIC P. QUAIN, *92, died of chronic pyelonephritis, arteriosclerotic heart disease, and chronic pancreatitis, September 11, at Salem Memorial Hospital. He obtained his medical degree in 1898 from University of Minnesota Medical School, Minneapolis, and had been in residence in Salem since 1950.*

DR. CHARLES KELSEY TODD, *60, of Roseburg, died November 5. He obtained his medical degree in 1928, from Stritch School of Medicine of Loyola University, Chicago. He had been a staff member of the Veterans Administration Hospital at Roseburg for six years.*

DR. HAROLD PATRICK O'NEILL, *43, of Albany, was killed in an automobile accident near Albany, January 12. He had practiced in Albany since 1951. Dr. O'Neill was a bomber pilot during World War II and took his medical training at the University of Minnesota Medical School after the war. He graduated in 1950.*

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EXECUTIVE SECRETARY *Mr. R. W. Neill, Seattle*
annual meeting September 15 - 18, 1963, Seattle

New series on respiratory diseases

First of what is expected to be a series of annual symposia on respiratory diseases will be held in the Health Sciences Auditorium, University of Washington School of Medicine, Seattle, February 28-March 1. The program will be sponsored by the Antituberculosis League of King County, Firland Sanatorium, Washington Thoracic Society, and Washington Tuberculosis Association.

Guest speakers are Benjamin Felson, Professor and Director, Department of Radiology, University of Cincinnati; Giles F. Filley, Clinical Physiologist, Webb-Waring Institute for Medical Research, Denver; Roger S. Mitchell, Director, Webb-Waring Institute; Richard H. Overholt, Overholt Thoracic Clinic, Boston; and James W. Raleigh, Medical Director, American Thoracic Society, New York.

RICHARD H. OVERHOLT, M.D.

ROGER S. MITCHELL, M.D.

GILES F. FILLEY, M.D.

BENJAMIN FELSON, M.D.

PROGRAM

THURSDAY, FEBRUARY 28

9:00 Recent Development in Sputum Collection and Processing *Roger S. Mitchell Jr., M.D.*
9:20 Sputum Cytology *N. Karle Mottet, M.D.*
9:40 Biopsy and Bronchographic Technics *Richard H. Overholt, M.D.*
10:10 Practical Approach to Interpretation of Chest X-rays *Benjamin Felson, M.D.*
10:50 Intermission
11:05 Angiographic Demonstration of Cardiopulmonary and Mediastinal Lesions *Melvin M. Figley, M.D.*
11:45 Panel Discussion *David Perry, M.D., Moderator*
1:30 Pulmonary Fibrosis, including Asbestosis, Sarcoidosis, Farmer's Lung, Thesaurosis *Roger S. Mitchell, M.D.*
2:00 Pulmonary Fibrosis, Physiologic Disturbances and Therapy *Giles F. Filley, M.D.*
2:30 Getting More Information from Chest X-rays *Benjamin Felson, M.D.*
3:15 Intermission
3:30 Current Diagnosis and Therapy of Carcinoma of the Lung *Richard H. Overholt, M.D.*
4:15 Panel Discussion *Waldo O. Mills, M.D., Moderator*

FRIDAY, MARCH 1

9:10 Asthma; an Approach to Medical Management *Paul P. Van Arsdel Jr., M.D.*

continued on page 142

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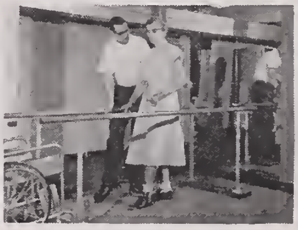

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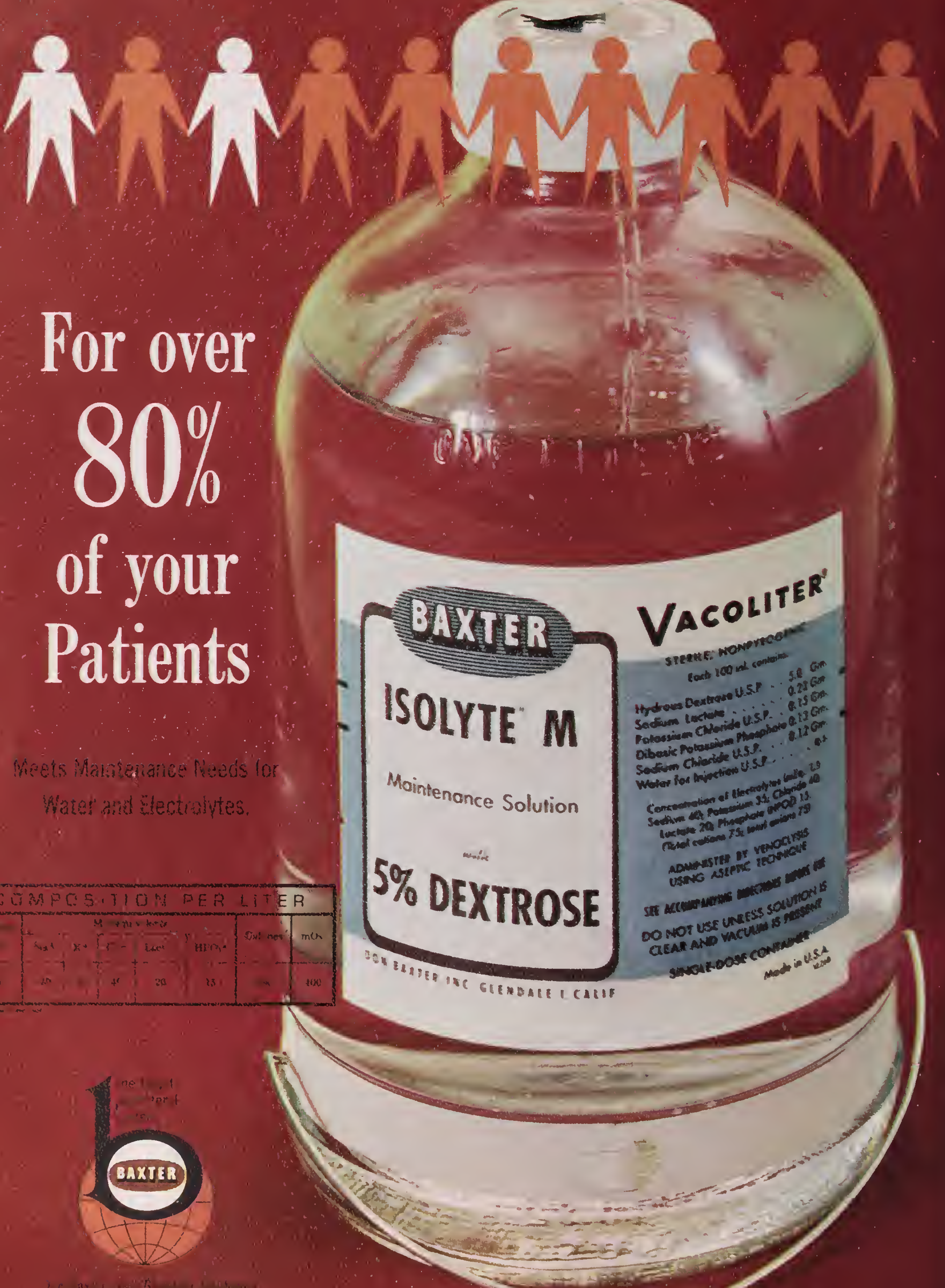
Yes, there is a difference. The glass container and administration set, pictured above, have no value until they are connected to each other and to a patient's vein. They are also valueless if they do not form a simple and safe method of transporting parenteral solutions into that patient's vein. This is where medical engineering comes in.

Medical engineering recognizes that simplicity of operation reduces the possibility of error at your patient's bedside, and, therefore, makes simplicity one of its chief goals. Medical engineering gives you Safety Through Simplicity.

Don Baxter, Inc., Glendale, California


BAXTER
ISOLYTE M
Maintenance Solution
with
5% DEXTROSE
VACOLITER
STERILE, NONPYROGENIC
Each 100 ml. contains:
Hydrous Dextrose U.S.P. . . 5.0 Gm.
Sodium Lactate . . . . . 0.22 Gm.
Potassium Chloride U.S.P. . 0.15 Gm.
Dibasic Potassium Phosphate 0.13 Gm.
Sodium Chloride U.S.P. . . 0.12 Gm.
Water for Injection U.S.P. . . . . q.s.
Concentration of Electrolytes (mEq./L): Sodium 40; Potassium 35; Chloride 40; Lactate 20; Phosphate (HPO4) 15. (Total cations 75; total anions 75)
ADMINISTER BY VENOCLYSIS USING ASEPTIC TECHNIQUE
SEE ACCOMPANYING DIRECTIONS BEFORE USE
DO NOT USE UNLESS SOLUTION IS CLEAR AND VACUUM IS PRESENT
SINGLE-DOSE CONTAINER
Made in U.S.A.
DON BAXTER INC GLENDALE 1 CALIF

For over 80% of your Patients

Meets Maintenance Needs for Water and Electrolytes.

COMPOSITION PER LITER

[illegible]	Milliequivalents						
	Na+	K+	Cl−	Lact	HPO4=	Cations	mOs
[illegible]	40	[illegible]	40	20	15	[illegible]	400

BAXTER

Don Baxter, Inc., Glendale, California

For peptic ulcer gastric hyperacidity and gastritis...

In year-long study on peptic-ulcer patients

New Creamalin® Antacid Tablets

*"...faster in onset of action...and for a longer period"**

"Clinical studies in 85 patients with duodenal ulcer ...confirmed the superiority of the new preparation [new Creamalin] over standard aluminum hydroxide preparations, in that prompt relief was achieved and maintained throughout the period of observation."*

Patients were followed for about one year.

New Creamalin promotes ulcer healing, permits less frequent feedings because it is so long-acting. Heartburn and epigastric distress were "...easily and adequately controlled...."* New Creamalin has the therapeutic advantage of a liquid antacid with the convenience of a palatable tablet. *It does not cause constipation.*

Each new Creamalin tablet contains 320 mg. of specially processed highly reactive dried aluminum gel (stabilized with hexitol) with 75 mg. of magnesium hydroxide. Minute particles offer a vastly increased surface area.

Dosage: Gastric hyperacidity—from 2 to 4 tablets as needed. Peptic ulcer or gastritis—from 2 to 4 tablets every two to four hours. *How Supplied:* Bottles of 50, 100, 200 and 1000.

Now also available—New Creamalin Improved Formula Liquid. Pleasant mint flavor—creamy pink color. Stabilized reactive aluminum and magnesium hydroxide gel (1 teaspoon equals 1 tablet). Bottles of 8 and 16 fl. oz.

Creamalin, trademark reg. U.S. Pat. Off.

*Schwartz, I. R.:
Current Therap. Res. 3:29, Feb., 1961.

Winthrop
LABORATORIES
New York 18 N.Y.

continued from page 136

9:30 Asthma, Surgical Treatment *Richard H. Overholt, M.D.*

10:00 Pathogenesis of Chronic Bronchitis and Emphysema; Early Diagnosis and Screen Tests *James W. Raleigh, M.D.*

JAMES W. RALEIGH, M.D.

10:30 Intermission

10:45 Inhalation Therapy; Use and Misuse in Office and Hospital Practice *Giles F. Filley, M.D.*

11:30 Treatment of Respiratory Acidosis and Pulmonary Insufficiency *Theodore N. Finley, M.D.*

12:00 Panel Discussion *Edward H. Morgan, M.D., Moderator*

2:00 Treatment of Tuberculosis, Current Drug Therapy *James W. Raleigh, M.D.*

2:30 Chemoprophylaxis and Outpatient Management of Tuberculosis (Daniel W. Zahn Memorial Lecture) *Roger S. Mitchell, M.D.*

3:00 Viral Respiratory Infections, Recognition and Treatment *J. Thomas Grayston, M.D.*

3:20 Intermission

3:35 Immunization in Viral Respiratory Infections; Influenza, Adenoviruses, Eaton Agent, Rubella, Rubeola, Varicella *E. Russell Alexander, M.D.*

4:00 Treatment of Bacterial Respiratory Infections *William M. M. Kirby, M.D.*

4:30 Panel Discussion *Robert G. Petersdorf, M.D. Moderator*

Bucove heads international organization

Bernard Bucove, director, Washington State Department of Health, has been elected to fill the office of the presidency of the State and Provincial Health Authorities of North America, it was announced recently. Dr. Bucove, recently elected vice-president of the organization, automatically succeeds D. G. Gill, of Alabama, whose untimely death last December vacated the organization's top post. He has served as secretary-treasurer for the last three years.

Dr. Bucove also was elected to the chairmanship of the nominating committee of the American Public Health Association at the organization's recent annual convention in Miami, Florida.

Outstanding hematologists to speak at Tacoma Academy of Internal Medicine

Three noted hematologists will form the panel of guest speakers at the 1963 annual meeting of the Tacoma Academy of Internal Medicine to be held Saturday, March 9 at Jackson Hall in Tacoma General Hospital. William Dameshek, Professor of Medicine, Tufts University School of Medicine, Boston; Clement A. Finch, Professor of Medicine, University of Washington School of Medicine, Seattle; and Robert D. Koler, Associate Professor of Medicine, University of Oregon Medical School, Portland, will discuss patients and present papers during the day.

WILLIAM DAMESHEK, M.D.

Dr. Dameshek obtained his medical degree at Harvard. Through his research, teaching, and publication of approximately 350 articles, books and monographs, he has become an outstanding authority on hematology. His books include: The Hemorrhagic Disorders; Spleen and Hypersplenism; Chemotherapy of Leukemia and Leukosarcoma; Hemolytic Syndromes; Leukopenia and Agranulocytosis; Leukemia. He is Senior Physician and Chief of Hematology, Pratt Clinic-New England Center Hospital and Blood Research Laboratory; Hematologist-in-Chief, Boston Floating Hospital and Boston Dispensary. He is Editor-in-Chief and Founder of *Blood—The Journal of Hematology.*

He will discuss purpura during the afternoon session and will give the banquet address on the subject of leukemia.

Dr. Finch is a graduate of the University of Rochester Medical School. His training was obtained at Peter Bent Brigham Hospital, where he began his career in research. He came to the University of Washington in 1949 and has been Professor of Medicine since 1955. He has numerous publications on various aspects of iron metabolism, red cells and anemia. He has become noted in teaching as well as in research. He will review the diagnosis and treatment of anemia.

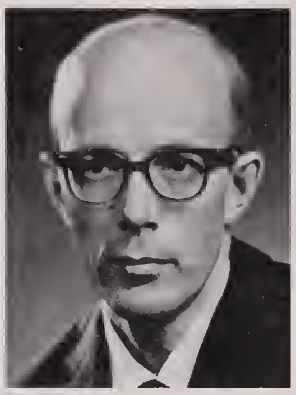
Dr. Koler is particularly interested in, and doing, research in medical genetics and hematology. He is the Associate Head, Division of Experimental Medicine, University of Oregon Medical School. He will discuss genetic influences in hematology.

CLEMENT A. FINCH, M.D.

All members of the medical profession are invited to attend. The registration fee of $7.50 includes the banquet. Those wishing additional information are asked to contact the 1963 Meeting Chairman, B. R. Rowen, M.D., 4625 Pacific Ave., Tacoma 8, Washington.

Spokane Society of Internal Medicine

Annual meeting of Spokane Society of Internal Medicine will be held at the Davenport Hotel, Saturday, March 16. The program will emphasize genetics. Guest speakers are Victor A. McKusick, Professor of Medicine at Johns Hopkins, David Y. Hsia, Professor of Pediatrics, Northwestern University, and Robert D. Koler, Assistant Professor of Medicine, University of Oregon Medical School.


ROBERT D. KOLER, M.D.

PROGRAM

8:15 Panel—Genetic Aspects of Responses to Drugs
9:30 Patterns of Inheritance—V. A. McKusick, M.D.
10:00 Clinical Cytogenetics—R. D. Koler, M.D.
10:50 Interesting Aspects of Inborn Errors of Metabolism—D. Y. Hsia, M.D.
11:20 Panel—Genetic Counseling
1:15 Movie—Medical Genetics Part I
2:00 Disorders of Connective Tissue—V. A. McKusick, M.D.
2:30 Medical Significance of Genetic Control of Protein Synethesis—R. D. Koler, M.D.
3:20 Heritable Renal Disease—D. Y. Hsia, M.D.
3:50 Panel—Role of Genetics in the Future of Medicine
5:00 Movie—Medical Genetics Part II
6:30 Banquet (informal), wives invited

PRESIDENT'S *page*

Medical Care for Individuals, vs. Politics as Usual

Attempting the other day to prepare a talk on the purposes and organizational structure of the American Medical Association for medical students, I came across a statement in some of the material provided by the AMA which went generally as follows: "The American Medical Association was founded in 1847 for the purpose of improving the scientific qualities of the practice and teaching of medicine." Certainly there is nothing wrong with the objectives as outlined in such a simple statement. As a matter of fact, every practicing doctor and every official of a medical society or association looks nostalgically back to the time of formation of the American Medical Association and says to himself wistfully that he wished all activities of organized medicine still were oriented in such a simple and direct manner.

DEAN K. CRYSTAL, M.D.

How nice it would be if there were no need to concern oneself about economics involved in the practice of medicine Even more ideal would be a state of affairs in which the practicing physician never had to concern himself in any way with developments in the politics which govern our nation.

continued on page 146

Formerly nervous
and tense, the Librium-
treated patient
is better able to...

enjoy his
children

This, in essence, is what happens when you place a patient on Librium therapy. He is better able to function normally, take an acti interest in family life, meet and solve daily problems.

Librium has a wide range of usefulness. Its spectrum of activity envelops and extends w beyond that of meprobamate and into certain indications for which phenothiazines are prescribed. Librium does not dull mental clarit or induce drowsiness. Its effect is prompt and decisive, even in patients where tranquilizer therapy has failed. Over-all, Librium offers y an unusually safe compound which is free from extrapyramidal or autonomic side effects, an which will not bring about or deepen depression. Librium is available in capsules of 5 mg, 10 mg and 25 mg, and in 100 mg ampuls a range of dosage strengths which enables you to treat all degrees of anxiety and tension in most patients. Consult literature and dosage information before prescribing.

anxiety and tension
relieved
alertness maintained

Librium®
chlordiazepoxide
the successor
to the tranquilizers

when lowered skin temperature suggests PERIPHERAL VASCULAR DISEASE

VASODĪLAN®

Isoxsuprine hydrochloride, Mead Johnson

for effective relief[1] of pain, cramping, numbness, and cold

In the clinical management of peripheral vascular disease, VASODĪLAN acts directly on the arterial wall to increase deep peripheral circulation.[2,3] It is well tolerated and effective at recommended oral doses,[1,2,4] essentially—

- *without* adverse effects on coronary flow[2,3]
- *without* ganglionic blocking[2]
- *without* increase in gastric acidity[3]
- *without* appreciable incidence of hypotension or tachycardia[2,3]
- *without* development of tolerance[5]

Dosage and administration: Oral—10 to 20 mg. (1 to 2 tablets) t.i.d. or q.i.d.; I.M.—5 to 10 mg. b.i.d. or t.i.d. *Contraindications:* There are no known contraindications to oral administration of VASODĪLAN in recommended doses. *Cautions:* VASODĪLAN should not be given immediately postpartum or in the presence of arterial bleeding. Parenteral administration is not recommended in the presence of hypotension or tachycardia. Intravenous administration is not recommended because of the increased likelihood of side effects. *Side effects:* Few side effects occur when given in recommended oral doses. Occasional palpitation and dizziness can usually be controlled by dosage adjustment. Single intramuscular doses of 10 mg. or more may result in hypotension or tachycardia. *Supplied:* 10 mg. tablets in bottles of 100 and 1,000; in 2 cc. ampuls containing 10 mg. (5 mg./cc.) for intramuscular use, boxes of 6. For complete details on indications, dosage, administration, and clinical background of VASODĪLAN, see the brochure of this product available on request from Mead Johnson Laboratories, Evansville 21, Indiana.

References: (1) Clarkson, I. S., and Le Pere, D. M.: Angiology *11*:190-192 (June) 1960. (2) Kaindl, F.; Samuels, S. S.; Selman, D., and Shaftel, H.: Angiology *10*:185-192 (Aug.) 1959. (3) Kaindl, F.; Pärtan, J., and Polsterer, P.: Wien. klin. Wchnschr. *68*:186-191 (March 16) 1956. (4) Samuels, S. S., and Shaftel, H. E.: J.A.M.A. *171*:142-145 (Sept. 12) 1959. (5) Billiottet, J., and Ferrand, J.: Semaine méd. *34*:635-637 (May 20) 1958.

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Laboratories

Symbol of service in medicine

continued from page 143

One step beyond that is to say that we in the profession never should have become involved in matters political. Putting it another way, either a critic of the profession, or one of the loyal members who is disturbed by modern developments, can say that had we never been involved in any way in politics we might now be free of so many of the problems and agonies which beset us. There is not the slightest question in my mind, however, that those who would have us turn back are blind to a number of the "facts of life." They actually are behaving in a cowardly manner. *We simply cannot avoid dealing with political realities.*

The overwhelming necessity for political involvement on the part of the profession comes from the fact that we cannot deny a pre-occupation with the welfare of individual people. Unfortunately, these same individuals no longer can escape the toils of politics to the degree that they could when we were a less populous country and when governmental philosophy was less directed toward mass solutions of mass problems. The individual of today lives surrounded by big government. He battles forever to preserve some sort of identity in the face of a governmental tendency to invade his daily life. Unfortunately, he demands protection from the sheltering wing of government and at the same time wonders why he has surrendered many of his prerogatives to the protective agent. It is our patients, whom we wish to help and protect, who are caught directly in political tangles. I submit that we of the profession really are secondarily, but still inextricably, caught by the needs of our people.

Our State Legislature is about to convene. One of the issues which will have to be considered by the law makers of our commonwealth is that of care for the needy and the near-needy. Your officers have done their best to gauge and evaluate the climate which will prevail in Olympia by interviewing officials concerned. We have come to the realization that an effort to solve those problems which exist here in the State of Washington may come to naught, no matter how agreeable to our point of view are the local officials, because of the threat of interference from even a higher echelon of government. In nearly every expression from the officials concerned about extensions of the Kerr-Mills approach to the problem of care for the medically needy, or for the entire welfare program, is implicit acceptance of the fact that in all likelihood the state may be relieved from virtually all of its knotty welfare problems by the intrusion of a Federal program. Depending on the official involved, who may see some jeopardy to his own province or empire, as it were, there is almost a shrugging acceptance of the fact that the all-powerful Federal government may come along and relieve us of nearly every one of the points of immediate contention. No one is offensive enough to suggest that the solution is ideal, but at least a Federally financed program will tend to "get the heat off" the local official in terms of providing funds and in terms of establishing a pattern whereby a law of dubious clarity may be administered. In short, "Why get shook, Doc, when the Federal government may step in and deny you any right to pass judgment on what happens here at the state level anyway?"

The only rational conclusion one can draw from such a state of affairs is the battle to preserve medical care as an individual service will be a long one.

The physician of the future will have to be articulate politically. He will have to continue to insist that his opinion and his expertise on problems of the care of the sick be consulted. Futhermore, he will have to harden his sense of resolution always to win the war regardless of how many battles he loses. There is ample evidence that lengthy experience with governmentally managed medicine may prove to be most unsatisfactory. Certainly the mere lack of doctors in Great Britain at the moment does not argue that the scheme is a successful one, or that it is one that carries ultimate success, despite polls which indicate that the average consumer of medical care in Great Britain seems to approve of the system. Sooner or later, glaring weakness of a lack of doctors in Great Britain will make itself felt.

The idea that individually provided medical care can be lost and never come back is an easy one to accept if one tends to be fatalistic and totally to lack conviction in favor of the system which has nurtured us.

My judgment is that acceptance of such ultimate defeat is the one crime we must not commit! Our confreres in business have become defeatists many times because of the ever-increasing tax burden placed upon them. But look what has happened. Tax reform is the phrase on everyone's lips. Even organized labor has acknowledged that confiscatory taxes seem more than any other one factor to be responsible for lethargy in the business community. One sees the spectacle of labor leaders and industrial leaders arguing together as allies that there is a need for tax reform to provide incentive for the expansion of our industrial and business activities. Why then is it unreasonable to assume that our patients, the great American public, will not come to their senses and agree ultimately with the physicians of the nation that there are features of individual medical care without which they cannot live? Frankly I believe that we are in a position in which we may have a number of defeats still to endure, but I think there is no reason to decide that there is any necessity to abandon hope for ultimate victory.

Dean K Crystal, M.D.

IDAHO

Idaho State Medical Association—364 SONNA BUILDING, Boise, Idaho

PRESIDENT *Manley Shaw, M.D., Boise*
SECRETARY *A. Curtis Jones, M.D., Boise*
EXECUTIVE SECRETARY *Mr. A. L. Bird, Boise*
annual meeting June 23-27, 1963, Sun Valley

Dispensary opened at capitol

As an association sponsored public relations project, a Legislative Dispensary—to serve members of the Senate and House from all counties in the state—was opened January 7. C. A. Robins of Lewiston, a former State Senator and Governor of Idaho, is serving as attending physician.

New officers

New officers of the Southwestern Idaho District Medical Society for the coming year are:

President, John F. Stecher, Caldwell
Vice-President, Harold W. Brown, Nampa
Secretary, Henry C. Wesche, Nampa, (re-elected)
Treasurer, Elizabeth L. Munn, Caldwell
Council Member, Samuel C. Taylor, Nampa
Delegates, John F. Stecher, and Charles E. Krause, Caldwell, Samuel C. Taylor, E. R. Carlsson, Kenneth E. Droulard, Nampa, William B. Jewell, Emmett.
Alternate Delegates, F. W. Cottrell, Nampa, George E. Davis, New Plymouth, Oaks H. Hoover, Caldwell, R. P. Rawlinson, Emmett, Thomas W. Watts, Payette, and R. George Wolff, Homedale.

New officers of the Upper Snake River Medical Society for the coming year are:

President, Emory L. Soule, St. Anthony
Vice-President, Asael Tall, Rigby
Secretary, Lester J. Petersen, Rexburg, (re-elected)
Treasurer, Robert R. Klamt, St. Anthony
Delegates, Emory L. Soule, St. Anthony, and Aldon Tall, Rigby.
Alternate Delegates, Murland F. Rigby, Rexburg, and Asael Tall, Rigby.

New officers of the Boise Valley Chapter, American College of Surgeons, elected during the organization's meeting in Boise on December 8, are:

President, Richard A. Forney, Boise
President-Elect, Kenneth L. Helferty, Boise (VA Hospital)
Secretary-Treasurer, Wayne G. Crookston, Boise (VA Hospital)

Officers of the Idaho Chapter, American Academy of General Practice for the coming year are:

President, P. Blair Ellsworth, Idaho Falls
President-Elect, W. Paul Shrum, Hayden Lake
Secretary-Treasurer, Titus W. McCowin, Shelley
Delegates, Arch T. Wigle, Pocatello, and John T. Brunn, Meridian.
Alternate Delegate, Joseph B. Marcusen, Nampa
Directors, Zach A. Johnson, Salmon, and John M. Ayers, Nampa.

State Board of Medicine Section

No temporary licenses were issued during December.

The regular three-day meeting of the State Board of Medicine for the purpose of conducting business and granting licenses was held in Boise, beginning January 14.

Members of the Board are: S. M. Poindexter, Boise, Chairman; Fred T. Kolouch, Twin Falls, Vice-Chairman; W. Wray Wilson, Coeur d'Alene; I. C. Gibbon, Kellogg; John E. Comstock, Pocatello, and Charles E. Kerrick, Caldwell.

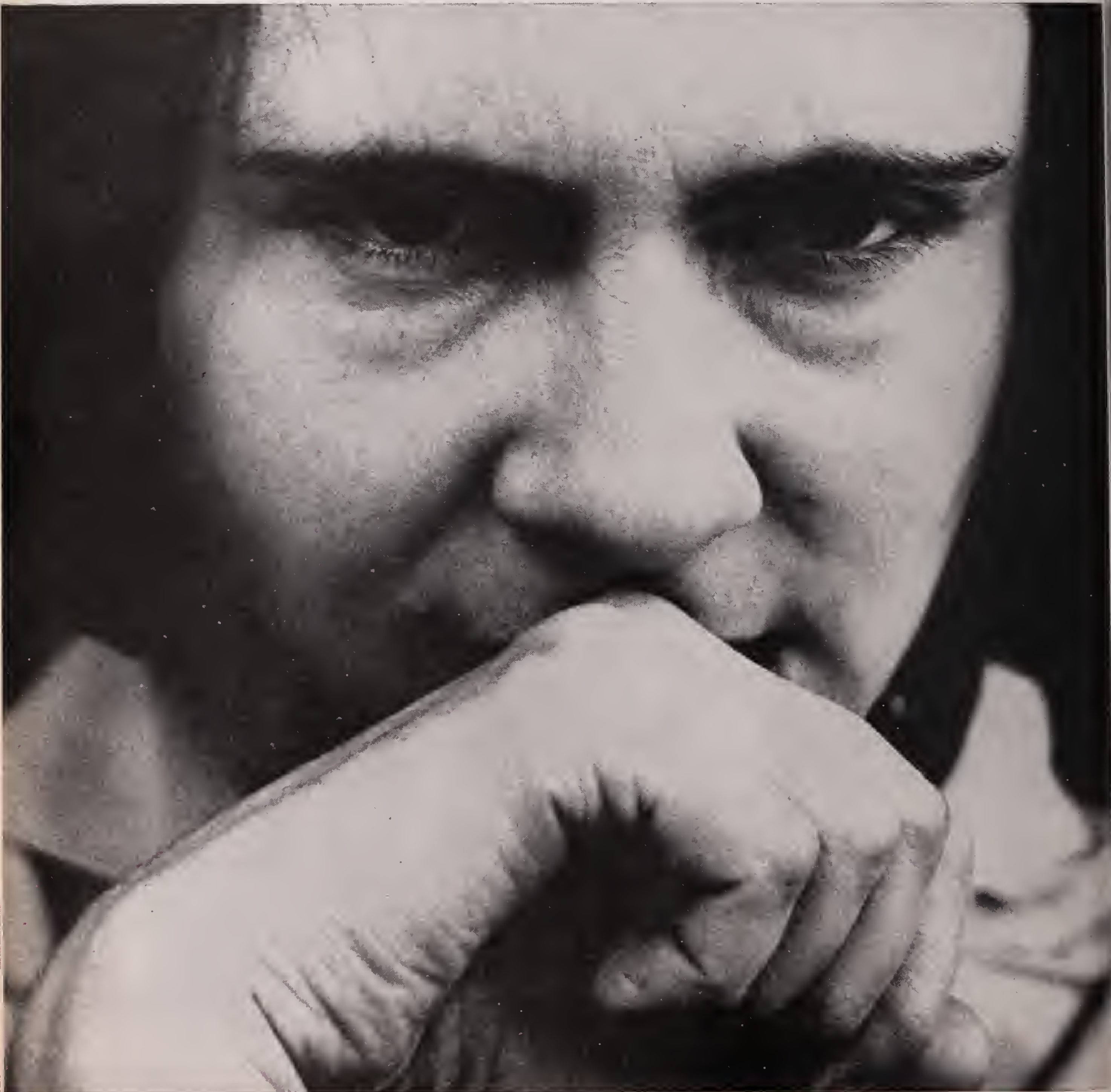
very likely to suffer from spastic colitis: the resentful woma

Psychologists find that patients with functional bowel syndrome tend to be resentful, hypersensitive or overconscientious.* S patients usually require relief from anxiety as well as from physical symptoms.
ENARAX provides both. Its anticholinergic, oxyphencyclimine, gives uninterrupted relief of pain, spasm, and hyperacidity thro prolonged action that is chemically "built in." Atarax (hydroxyzine HCl) calms without increasing gastric acid secretion. Combine ENARAX, they successfully control symptoms of functional bowel syndrome, peptic ulcer and many other G.I. dysfunctions. We th you'll find ENARAX most likely to succeed with **your** G.I. patients. For complete prescription information, consult product brochu

*Alexander, F.: Psychosomatic Medicine, New York, W. W. Norton, 1950, p.

When "minus" means anemia due to deficient iron intake or blood loss, Rx HEPTUNA® PLUS

New York 17, N.Y., Division, Chas. Pfizer & Co., Inc., Science for the World's Well-Being®



most likely to control the symptoms **ENARAX**®

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"Sounds like a case for Protamide, Jim..."

Just a few words from one physician to another and yet thousands of patients with the pain of neuritis or herpes zoster have been helped to fast relief and speedier recovery by this helpful suggestion.

Relief of inflammatory radicular pain, including herpes zoster, is prompt when Protamide is administered early[1-4] in the course of the disease. More important, recovery usually follows in three to six days, with prompt response even in ophthalmic herpes zoster.[5]

REFERENCES: (1) Baker, A. G.: Penn. Med. J. *63*:697 (May) 1960. (2) Smith, R. T.: New York Med. (Aug. 20) 1952, pp. 16-19. (3) Smith, R. T.: Med. Clin. N. Amer. (Mar.) 1957. (4) Lehrer, H. W.; Lehrer, H. G., and Lehrer, D. R.: Northw. Med. (Nov.) 1955. (5) Sforzolini, G. S.: Arch. Ophthal. *62*:381 (Sept.) 1959.

PROTAMIDE® —an exclusive colloidal solution of processed and denatured enzyme—is not foreign protein therapy.

Boxes of 10 ampuls, 1.3 cc. each, for intramuscular injection.

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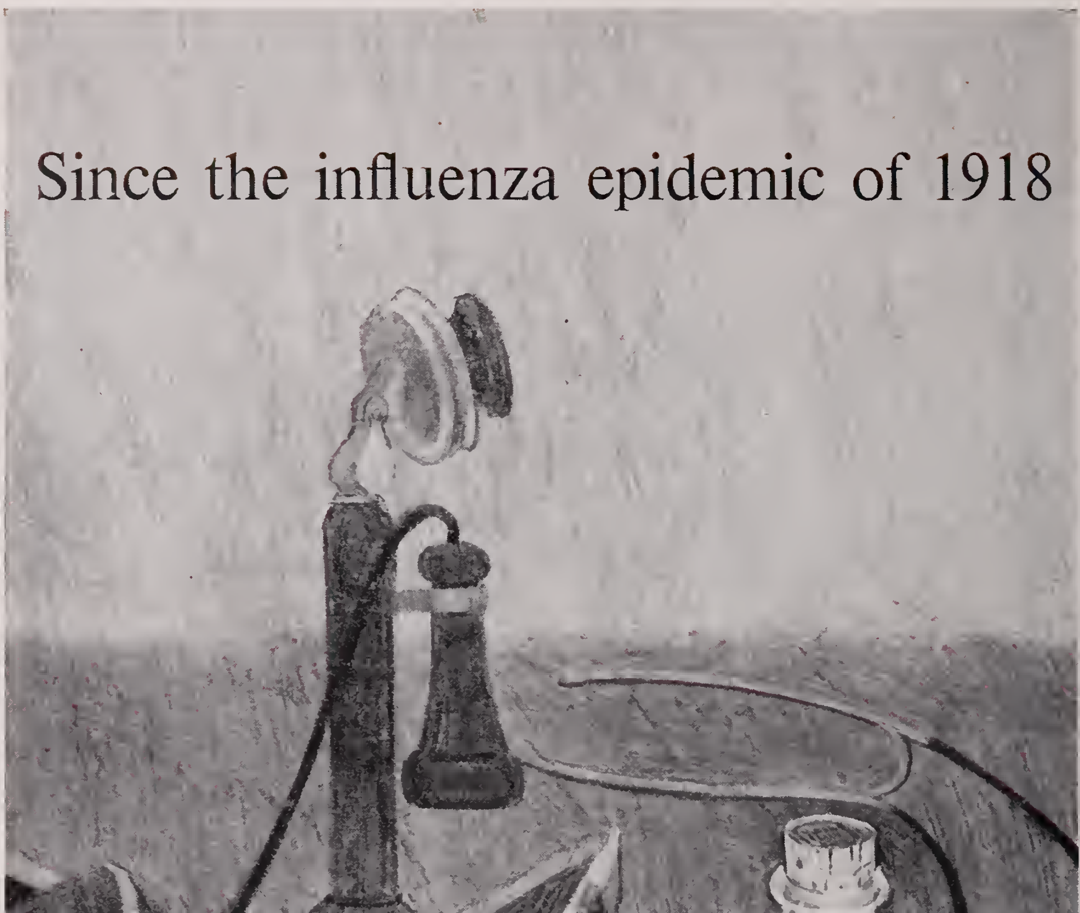
Since the influenza epidemic of 1918
Burroughs Wellcome & Co.
TRADE MARK 'TABLOID' BRAND
'Empirin' Compound
COMPRESSED
Swallowed with a little water; may be
repeated every two hours.
As directed by physician.
WARNING: Keep out of children's reach

....the first choice of many physicians to relieve aches, pains, fever, and general malaise of colds and flu.

Symptomatic and supportive treatment of patients with upper respiratory infections still consists largely of rest, analgesics, fluids and nasal decongestants. During the fateful influenza epidemic of 1918, 'Empirin' Compound was widely used and became well known as a well tolerated and reliable analgesic combination. It was one of the few available analgesic products effective in simultaneously reducing fever and relieving the general malaise which often accompany the flu.

Later, 'Empirin' Compound with Codeine took its place with the widely used 'Empirin' Compound, as a product useful when increased analgesia or antitussive action was desired. Today, 'Empirin' Compound with Codeine is one of the most widely prescribed drugs in medicine, providing physicians with a dependable analgesic, especially useful in relieving the symptoms of colds and flu. We believe you will also find 'Empirin' Compound with Codeine Phosphate gr. ¼ (16 mg.) or gr. ½ (32 mg.) particularly useful in treating the troublesome cough that is often part of the influenza symptom complex.

'EMPIRIN' COMPOUND with CODEINE PHOSPHATE *

gr. ⅛
gr. ¼
gr. ½
gr. 1
100 'TABLOID' 'Empirin' Compound
100 'TABLOID' 'Empirin' Compound with Codeine Phosphate, No. 1
100 'TABLOID' 'Empirin' Compound with Codeine Phosphate, No. 2
100 'TABLOID' 'Empirin' Compound with Codeine Phosphate, No. 3
100 'TABLOID' 'Empirin' Compound with Codeine Phosphate, No. 4
KEEP COOL AND DRY
BURROUGHS WELLCOME & CO.

* Available on oral prescription where State law permits. Subject to Federal Narcotic Regulations.

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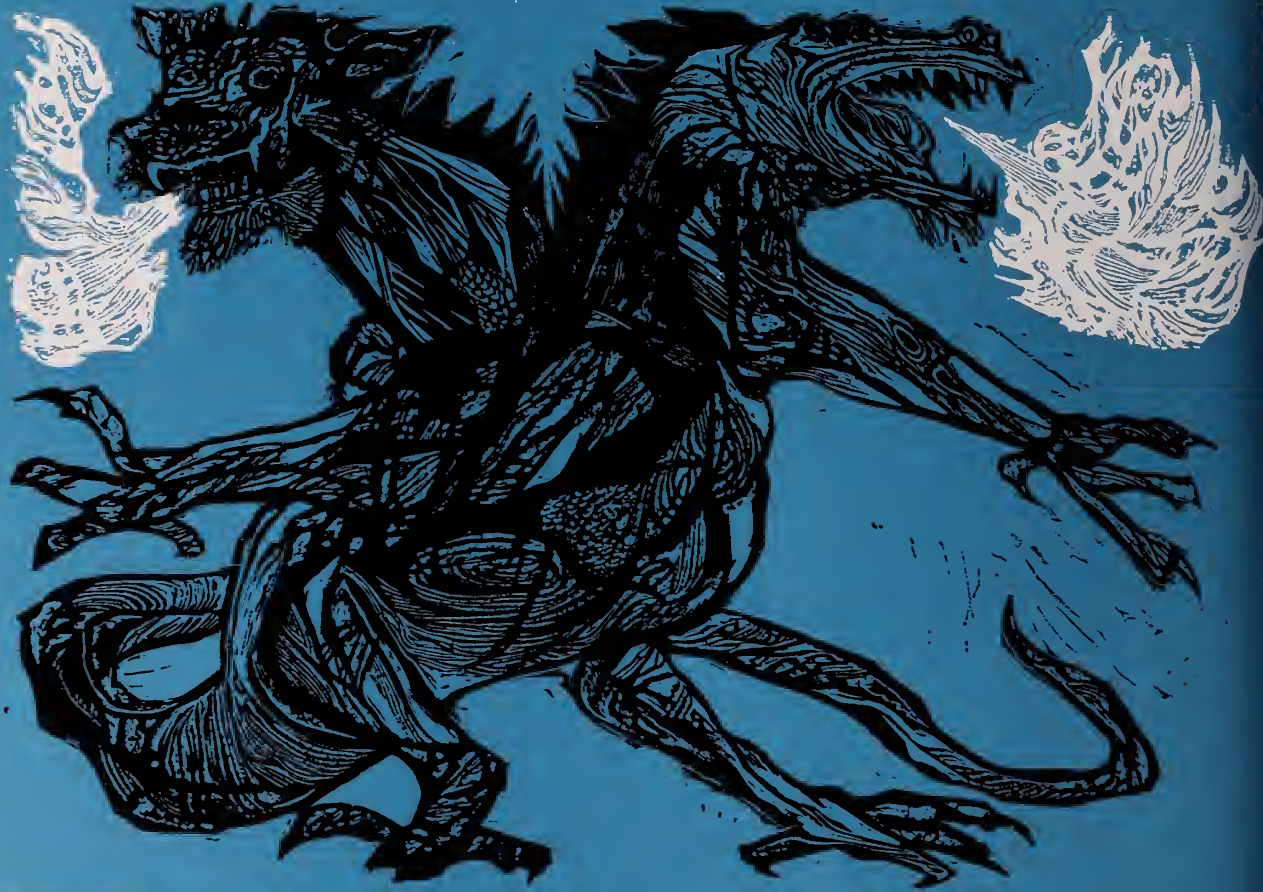
When severe pain intensifies skeletal muscle spasm–ease both 'pain & spasm' with



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Robaxin® with Aspirin

Conditions which trigger skeletal muscle spasm often are painful in themselves. A relaxant drug may relieve the spasm, but the primary pain persists. In such cases, a dual-acting relaxant-analgesic is necessary to overcome the two-headed dragon of pain-and-spasm.

ROBAXISAL and ROBAXISAL-PH offer such a combination. These formulations combine the dependable skeletal muscle relaxant action of Robaxin and the pain-tested analgesic action of aspirin or Phenaphen.

For painful skeletal muscle spasm...

Robaxisal®

Each ROBAXISAL *Tablet contains:*

ROBAXIN (methocarbamol Robins) U.S. Pat. No. 2770649	400 mg.
Acetylsalicylic acid (5 gr.)	325 mg.

Supply: Bottles of 100 and 500 pink-and-white laminated tablets.

When anxiety is associated with painful skeletal muscle spasm...

Robaxisal®-PH

(Robaxin with Phenaphen)

Each ROBAXISAL-PH *Tablet contains:*

ROBAXIN (methocarbamol Robins)	400 mg.
Phenacetin	97 mg.
Acetylsalicylic acid	81 mg.
Hyoscyamine sulfate	0.016 mg.
Phenobarbital (1/8 gr.)	8.1 mg.

Supply: Bottles of 100 and 500 green-and-white laminated tablets.

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Making today's medicines with integrity... seeking tomorrow's with persistence

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Board eligible or certified, to develop and provide authoritative medical opinions regarding drug products. Salary to $13,695. Limited private practice permitted. Membership and participation in professional organizations encouraged. Liberal benefits of Federal Civil Service including life insurance, health benefits, and excellent sick, vacation, and retirement benefits. 5 day, 40 hour week. Cost of travel and transportation of household furnishings to Washington, D.C., will be paid. Send complete curriculum vitae to: Ralph G. Smith, M.D., Acting Medical Director, Food and Drug Administration, Washington 25, D.C.

ASSOCIATE WANTED

Well qualified internist or surgeon willing to do some general practice, by 2-man partnership in suburban area of Eastern Washington. Salary first year then partnership if desired. Write Box 28-D, Northwest Medicine, 500 Wall St., Seattle, Wash.

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AMA Annual—Atlantic City, June 16-20, 1963; San Francisco, June, 21-25, 1964, New York, June 20-24, 1965.

AMA Clinical—Portland, Dec. 1-4, 1963; Miami Beach, Nov. 29-Dec. 2, 1964.

Oregon State Medical Society—Sept. 25-28, 1963, Portland.

Washington State Medical Association—Sept. 15-18, 1963, Seattle.

Idaho State Medical Association—June 23-27, 1963, Sun Valley.

North Pacific Society of Neurology and Psychiatry—April, 1963, Seattle
Pres., Robert M. Rankin, Seattle
Sec., Thomas H. Holmes, Seattle

Northwest Soc. for Clin. Research—Jan. 10-11, 1964, Vancouver, B. C.
Pres., Denys K. Ford, Vancouver
Sec., R. E. Beck, Vancouver

Pacific Northwest Obstetrical and Gynecological Association — June 3-5, 1963, Victoria, B.C.
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Sec., J. McDonagh, Vancouver, B.C.

Biennial Western Conference on Anesthes.—Mar. 25-28, 1963, Honolulu.
Chrmn., John Dillon, Los Angeles
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Oregon Dermatologic Society—Portland 2nd Wednesday (Nov., Jan.-Apr.)
Pres., Sheldon Walker, Portland
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Oregon Pathologists Association—Portland, 2nd Wednesday (Feb., Apr., Oct., Dec.)
Pres., F. L. Vrtiska, Corvallis
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Oregon Radiological Society—University Club, Portland, 2nd Wednesday through school year
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Ore. Soc. Obst. & Gynec.—Portland, Park Heathman, 3rd Fri. (Oct., Nov., Jan., May)
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Sec., T. A. Treanor, Portland

Oregon State Society of Anesthesiologists—Portland, 3rd Friday (except June, July, Aug.)
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Portland Academy of Pediatrics—1st Monday
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Portland Surgical Society—last Tuesday (Sept.-May), UOMS Library
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WASHINGTON

Puget Sd. Acad. Ophth. & Oto.—3rd Tues. (Oct.-May) Seattle or Tacoma. Annual—Seattle, Jan. 17, 18, 1964.
Pres., H. L. Maier, Tacoma
Sec., D. F. Milam, Jr., Bellevue

Seattle Academy of Surgery—3rd Wed. bi-monthly; Seattle Yacht Club.
Pres., E. B. Parmelee
Sec., W. S. Brown

Seattle Gyn. Soc.—3rd Wed. exc. June, Aug., Dec., Feb.
Pres., D. M. McIntyre, Seattle
Sect., E. T. MacCamy, Seattle

Seattle Pediatric Society—3rd Friday (Sept.-May), College Club
Pres., R. F. L. Polley, Seattle
Sec., G. Pyne, Seattle

Seattle Surg. So.—4th Mon. (Sep.-June) Annual—Seattle, Jan. 24-25, 1964.
Pres., Eric Sanderson, Seattle
Sec., R. C. Coe, Seattle

Spokane Society of Internal Medicine—Quarterly, Rockwood Clinic
Pres., Robert Berghan
Sec., Richard E. Steury

Spokane Surgical Society—April 6, 1963, Davenport Hotel
Pres., F. M. Lyle
Sec., C. R. Cavanagh

Tacoma Academy of Internal Medicine—4th Tuesday (Sept.-May)
Pres., R. A. Kallsen
Sec., R. A. O'Connell

Tacoma Surgical Club—May 4, 1963, 3rd Tuesday (Sept.-May)
Pres., Dumont Staatz
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Washington Academy of Clinical Hypnosis—3rd Friday (Sept.-June)
Pres., Edward G. Goodrich, Ph.D., Seattle
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Washington Academy of General Practice—May 17-19, 1963, Wenatchee.
Pres., Louis Dewey, Omak
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Washington State Obstetrical Association—March 30, 1963, Seattle
Pres., R. K. Plant, Seattle
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Washington State Radiological Society—Seattle, 4th Mon., (Sept.-Apr.) Business Session, Meany Hotel, Scientific Sn. UWSM X-ray Dept.
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References: (1) Thacher, H. C., & Fishman, L.: *J. Maine M. A.* **52**:84, 1961. (2) Hopkins, E. W.: *Postgrad. Med.* **29**:451, 1961. (3) Hall, W. H.: *M. Clin. North America* **43**:191, 1959. (4) Krugman, S.: *Pediat. Clin. North America* **8**:1199, 1961. (5) Ede, S.; Davis, G. M., & Holmes, F. H.: *J.A.M.A.* **170**:638, 1959. (6) Wolfsohn, A. W.: *Connecticut Med.* **22**:769, 1958. (7) Calvy, G. L.: *New England J. Med.* **259**:532, 1958. (8) Hendren, W. H., III, & Haggerty, R. J.: *J.A.M.A.* **168**:6, 1958. (9) Cutts, M.: *Rhode Island M. J.* **43**:388, 1960. (10) Berman, W. E., & Holtzman, A. E.: *California Med.* **92**:339, 1960. (11) Vetto, R. R.: *J.A.M.A.* **173**:990, 1960. (12) Sia, C. C. J., & Brainard, S. C.: *Hawaii M. J.* **17**:339, 1958. (13) Rosenthal, I. M.: *GP* **17**:77 (March) 1958. (14) Gaisford, W.: *Brit. M. J.* **1**:230, 1959.

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REFERENCES: (1) Baker, A. G.: Penn. Med. J. *63*:697 (May) 1960. (2) Smith, R. T.: New York Med. (Aug. 20) 1952, pp. 16-19. (3) Smith, R. T.: Med. Clin. N. Amer. (Mar.) 1957. (4) Lehrer, H. W.; Lehrer, H. G., and Lehrer, D. R.: Northw. Med. (Nov.) 1955. (5) Sforzolini, G. S.: Arch. Ophthal. *62*:381 (Sept.) 1959.

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Questionable surgery?

EDITOR, NORTHWEST MEDICINE

Regarding the issue of January 1963, and "Coronary Reconstruction for Angina Pectoris":

It should be pointed out that the use of other coronary dilators and anticoagulents carry far less risk and results better recognized than the operation described.

The same may be said for the simple drinking of a glass of water containing the proper amount of radio-active iodine.

Sincerely yours,
J. C. MICHEL, M.D.
Seattle, Washington

Careless perversion of the scientific method

EDITOR, NORTHWEST MEDICINE

As an avid reader of NORTHWEST MEDICINE, I wish to direct my most hearty congratulations to you and the collected authors who have bravely admitted a ray of light into the subject of mental illness. It is my fond hope that you might gather together and address yourselves to other important research. Better perhaps might be your suggestion to work independently and then join together to compare results.

I am quite certain that many of today's problems would not exist, or seem to, if your collective method of discerning facts had only been more closely followed. Congress, and indeed the whole nation, would be pleased to know, that editorially speaking, NORTHWEST MEDICINE has decided that the democratic process and nursery school statistics represent the clear and certain method of extracting facts from chaos. It is most unfortunate that Newton and Einstein did not know of the advantages in your method. If, as an example, Newton had known that the integral calculus could have been worked out by questionnaires and semi-consensual validation, he could have saved himself an enormous amount of labor.

If I seem to belabor the point a bit, please forgive me, but such combinations of prejudice, poor thinking, and denial of reality impress me as something short of science and so remote from fact as to be best defined as nothing more than undiluted male bovine excrement.

Look not to morbidity but also to mortality. Self cure for mental illness has been statistically (and no argument can deter this one) shown to annually find its only rival in highway slaughter as a cause of death in the physically firm. If suicide statistics cannot alone deter you from careless perversion of the scientific method, look to your own state hospital system which equals bed for bed all other hospital facilities.

I am only hopeful that in the future NORTHWEST MEDICINE will make some effort to present opinion as opinion, and not to sanctify such by calling it fact.

Respectfully yours,
HENRY H. DIXON, JR., M.D.
Portland, Oregon

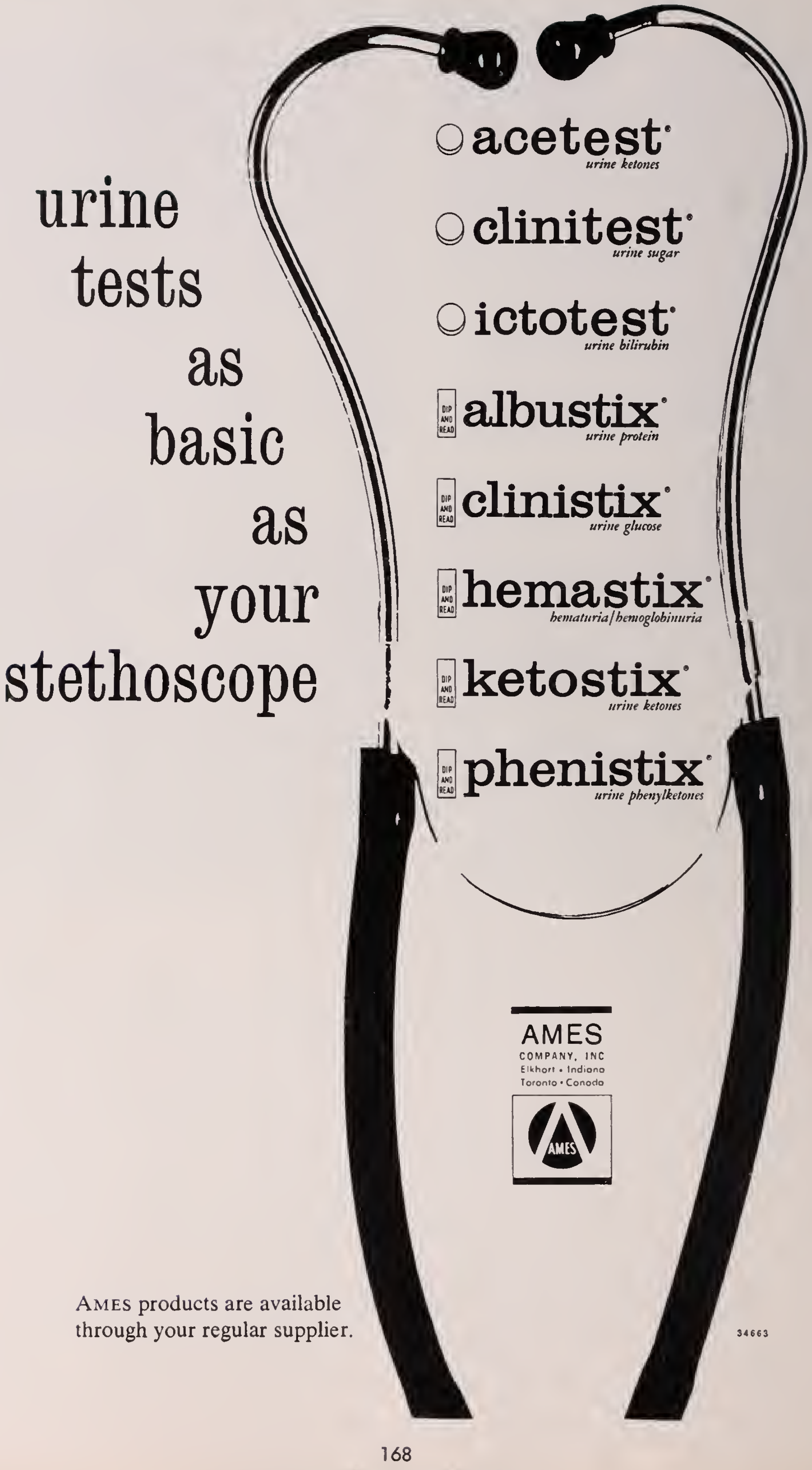
Worthwhile project

EDITOR, NORTHWEST MEDICINE

The Department of Pediatrics, University of Washington School of Medicine is currently undertaking a bi-state project involving the states of Oregon and Washington to attempt to determine the incidence of a second mongoloid child being born into a family. This will obviously be a service project since every physician can realize the importance of such a study in counseling of such families. How a family with one mongoloid child should be answered concerning future productivity is a question frequently asked in the literature. We feel there are not satisfactory figures yet available in this country. Follow up chromosome studies will also be done.

Very shortly all physicians in these two states will receive correspondence concerning this project. We wish to urge them to return the necessary information at their earliest convenience. Each cooperating physician will receive a final report on the results of this study. It can be a success only if it involves a large enough sample, and the size of the sample depends upon the cooperation of each individual physician. We hope they will give us their prompt consideration when they are contacted.

Sincerely yours,
DELBERT H. DAYTON, M.D.
Seattle, Washington



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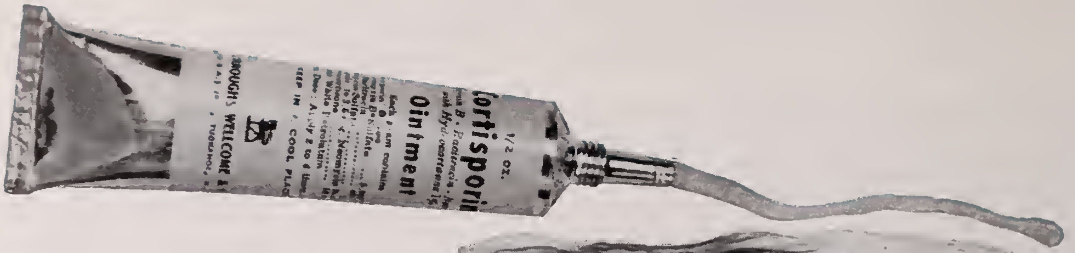

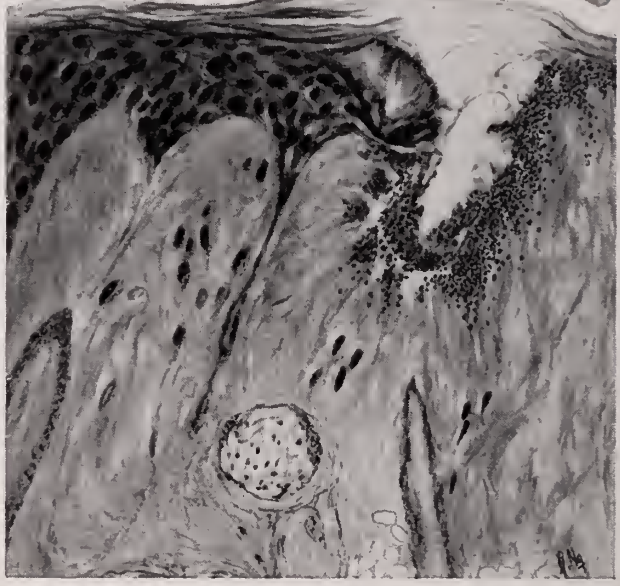

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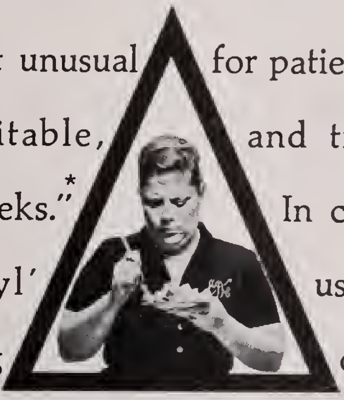

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Matlin, E.: The Obvious in Obesity, Clin. Med. 8:1071 (June) 1961.

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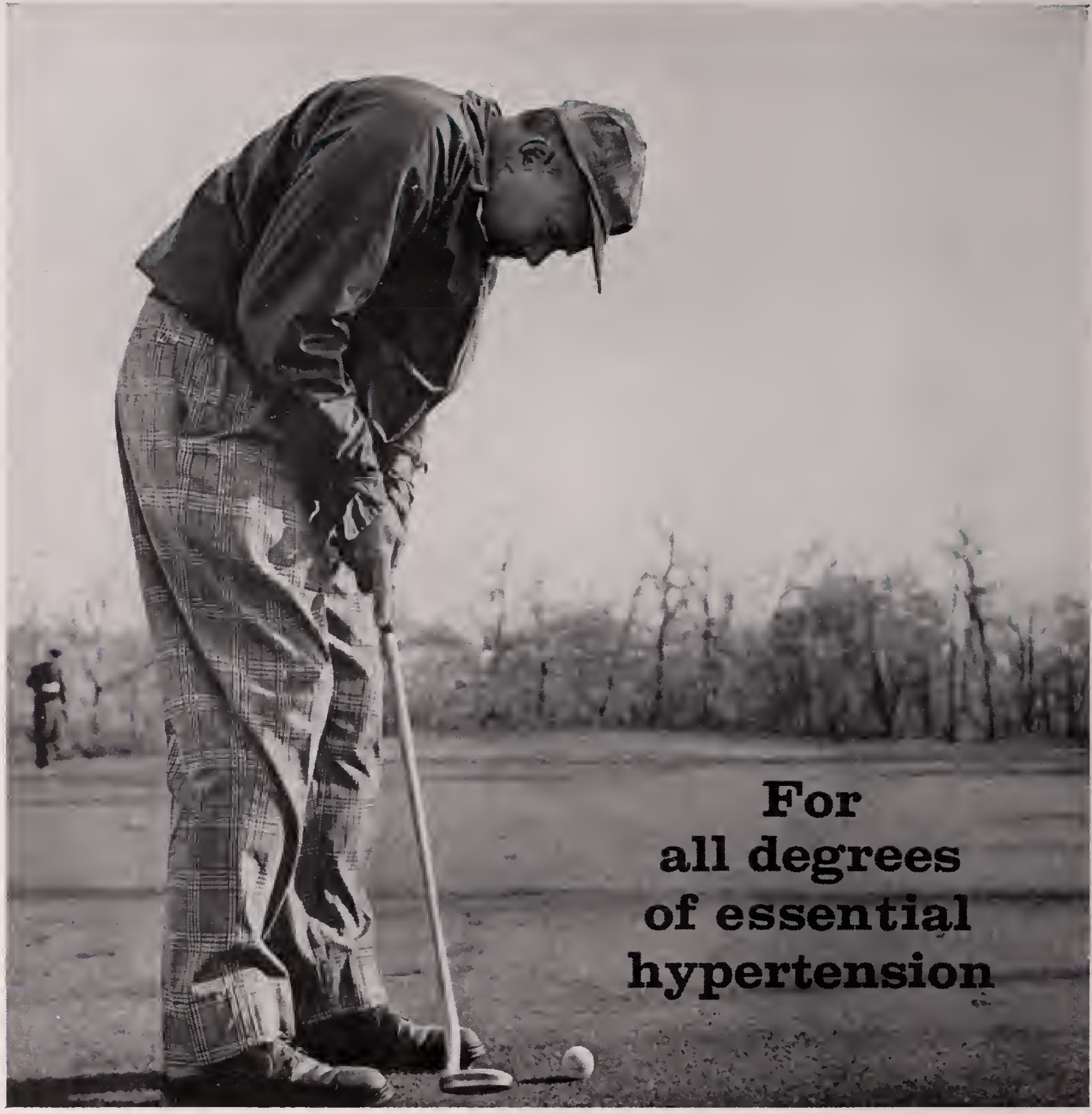

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[†] Hutchison J. C.: Current Therap. Res. 2:487 (Oct.) 1960.

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*Sandweiss, D. J.: Peptic Ulcer, Philadelphia, W. B. Saunders Co., 1951, p. 13

**Smith, L.A., and Rivers, A. B.: Peptic Ulcer, New York, Appleton-Century-Crofts, Inc., 1953, p. 13

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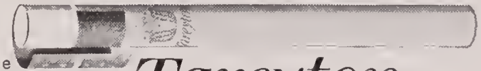

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Report from Authors

Because this does not quite fit the definition of an editorial, I shall, for once, emerge from what Joseph Garland calls the editor's spurious anonymity, to make a sort of case report on what authors report to me. I've never been sure about the reasons for editorial plurality, whether it be a schizoid feeling from having such a variety of tasks to perform or merely because a journal is such an imperious mistress that freedom implied by the singular is usually unthinkable.

This report, however, is concerned mainly with a single function from which there can be no escape into shared, and therefore diluted, responsibility. One of the editor's functions is to edit. It is not an easy task.

Does one edit very little, or very much? Does one merely correct grammar and spelling, and mark for type, or does one rewrite extensively? Does one make so many changes that the style ceases to be that of the author and reflects only the mannerisms of the editor, or should the author's language be preserved, even if it is tough on the reader? And if the author makes an assertion that might not state precisely what he probably intended, how does one determine exactly what he did mean? Or, if he omits a statement that ought to be included, for fact or for clarity, does one invent a whole new sentence or paragraph for him? Will subheads give the reader the intended relief, and will they be where the creator of the manuscript would have placed them in his outline—provided he actually made one?

These questions and many more have plagued me every time I have picked up a pencil in one hand and a fresh, clean manuscript in the other, to get it ready for the printer. Am I mutilating, or doing reconstructive surgery?

It is gratifying to learn that few have been offended and quite a number pleased. I have heard from 89 per cent of the authors who have contributed to this journal during the past three years. Questionnaires were sent to 147 authors; 131 were returned. This is more than a gratifying response. It is, to use one of Clarence Smith's favorite words, astonishing.

The first question, major reason for the mailing, concerned editing specifically. Three writers said there had been too much editing, four said not enough and 93 said that editing had been about right. Fifty felt their manuscripts had been improved, one that his had been harmed. Forty-three indicated that editing had followed the author's thought, one that there had been deviation.

I think that these were honest answers. I had expected criticism and in order to permit it freely, had asked recipients not to sign the questionnaire. The request was honored in every instance. A few, possibly suspecting a code, used a plain cover rather than the business reply envelope provided and one signed "*The Phantom*" below a note too flattering to be copied here.

An entirely unexpected finding was the extent to which this journal is followed in foreign lands. Forty-five authors reported that they had received letters or cards from foreign countries. Most listed from one to five such communications but a few reported as many as 20. Requests for reprints come to the publishing office occasionally but I had not previously realized that so many were being addressed directly to authors. This journal goes to libraries and hospitals in various parts of the world and may have been seen there but a number of the requests probably had their origin in an index. At least one of these, of world wide circulation, carries authors' addresses as well as titles.

Production, that phase of operation carried on after the editing has been done, is usually a shared, and sometimes delegated, responsibility. It was the subject of three questions. Under each there were three spaces—good, poor, and fair. Under *publication*, 106 checked good, none marked poor, and 6 said fair. For *placement* the response was, good—121, poor—1, fair—5. *Printing* was considered good by 127 and fair by 3.

Few authors added comments. With a single exception those written on the margin or back of the sheet were either favorable or were constructive suggestions. The exception, from an author who marked the editing as satisfactory, was a marginal note, "A favorable impression of the journal is not implied."

Although I expected, and would have appreciated, more criticism, it is pleasant to know that some, at least, of the questions in the third paragraph have been answered acceptably. Nevertheless, I will probably continue to worry about them every time I pick up a fresh manuscript and start it on its way to these printed pages.

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Mould and Prosthetic Arthroplasties of the Hip

JOHN F. LeCOCQ, M.D. Seattle, Washington

This discussion will not be a statistical report but is based on personal observations made on 369 cases of mould and prosthetic arthroplasties of the hip performed by nine orthopedic surgeons of the Seattle Orthopaedic and Fracture Clinic. Of this number, 319 were performed at the Swedish Hospital and 50 were performed at the various other hospitals in Seattle, and in outlying communities. These were done in a 12-year period from 1949 through 1961 inclusive. As the years have passed, more prosthetic arthroplasties are being done as compared to mould arthroplasties, because it has been found to be feasible to do prosthetic arthroplasties in elderly patients with severe malum coxae senilis and in fresh or ununited femoral neck fractures. This arbitrary period, from 1949 through 1961, was selected because in those years mould and prosthetic arthroplasties were proving to give better results. I did many fascial arthroplasties from 1930 until about 1940 but with advent of the vitallium mould fascial arthroplasties were abandoned.

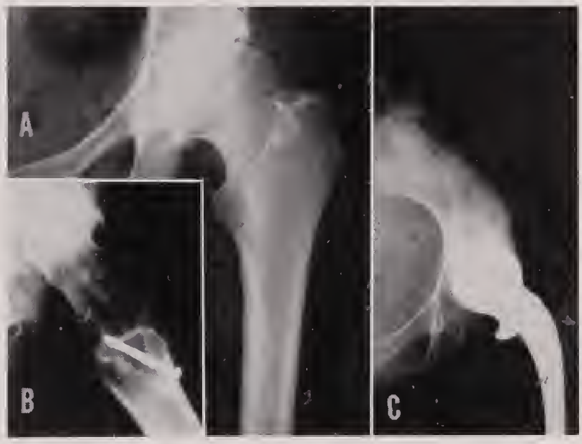

Fig. 1. A—Degenerative arthritis of hip. Fascial arthoplasty done in 1944. B—Six years after fascial arthroplasty. Absorption of femoral head and neck. Recurrence of painful, fibrous ankylosis. C—Eleven years following Eicher prosthetic arthroplasty, 1951. Excellent motion, stability, and freedom from pain.

Restoration of motion and ablation of pain in a joint have been challenges to surgeons for a great many decades. The first arthroplasty was performed on an ankylosed temporo-mandibular joint in 1860. Most arthroplasties of that period were confined to non-weight-bearing joints which, of course, always show better results. John B. Murphy of Chicago was, probably, the first surgeon to attempt arthroplasties in weight-bearing joints. In 1902 he began by lining the reconstructed joints with pedunculated flaps of tissue. Subsequently, Campbell of Memphis did a great many hip arthroplasties by using free grafts of fascia lata and using a double layer of the fascia in the reconstructed hip joint. Baer of Baltimore used chromocized pig's bladder for relining the reconstructed joint. These operators used meticulous care in reshaping the acetabulum and femoral head. They achieved good stability and adequate motion. Nevertheless, when fascia was used, there was eventual absorption of the head and neck with resultant instability. Frequently the patients suffered recurrence of painful, fibrous ankylosis.

Figure 1, A, B, show what frequently happened in a fascial arthroplasty. As the years went on, the patient became more and more disabled because of a painful hip with very limited motion. An Eicher prosthesis was inserted six years after the fascial arthroplasty, Fig. 1,C. Since then she has had an excellent functional result, a painless hip with good motion and good stability.

With the advent of the vitallium mould for hip arthroplasties in 1938, the end results became better. However, absorption of the head within the mould frequently compromised the end result, Fig. 2. This complication can be obviated, to some degree, by using great care to preserve the hard, sub-chondrial bone on the femoral

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From the Seattle Orthopaedic and Fracture Clinic.

Presented at the Washington State Medical Association Annual Meeting, Spokane, Washington, September 18, 1962.

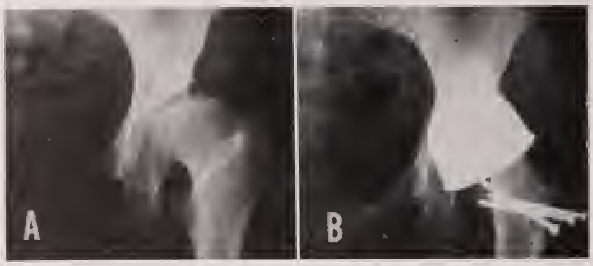

Fig. 2. A—Congenital dysplastic hip. Mould arthroplasty February 1954. B—Six years later, partial absorption of head within mould, unstable joint. There is good motion but some pain.

head, especially at the chief weight-bearing portion, and to absolutely avoid stripping the periosteum from the neck of the femur. There may be a great deal of new bone production around the mould and acetabular edges which will be a factor in limiting the joint motion, or in freezing of the mould. This can, in good measure, be prevented by the liberal use of oxycel gauze. Frequently three or four bottles of this material are used in a hip arthroplasty.

In doing a mould arthroplasty, care must be taken to get the mould in correct relationship with the head and neck of the femur and the acetabulum, by the use of special reamers. A varus position of the mould leads to instability of the head in the mould and too much valgus position leads to its gradual subluxation out of the acetabulum; the causative factors will be explained later. Use of the new concentric mould in which the outer surface forms a perfect arc, has proven to give much better results.

In the last fifteen years various types of hip prostheses were introduced. At first these were chiefly used for the replacement of the femoral head in old or fresh fractures of the femoral neck. At the beginning, most hip prostheses were the stem type, made of acrylic, nylon, and other plastic materials. Because of the many poor results obtained by these devices there finally evolved the intramedullary type which, for several years now, has on the whole, been giving very satisfactory results. In probably more and more orthopedic clinics, as has occurred in our clinic,—use of vitallium and stainless steel intramedullary prostheses has been replacing mould arthroplasties. However, it is my opinion that vitallium mould arthroplasty is still indicated if the femoral head is not too seriously deteriorated, especially in patients up to about 65 years of age. If the mould arthroplasty fails, a prosthetic arthroplasty can be done later with reasonable assurance of success, but if a prosthetic arthroplasty goes sour, a salvaging operation such as a Colonna, pelvic support osteotomy or hip fusion is not too satisfactory, especially in older people.

dyno-mechanics of the hip joint

Pauwels, in 1936, pointed out the stresses to which the hip joint is subjected and showed that an unbelievable amount of force is transmitted through the weight-bearing portion of the femoral head under certain circumstances. He calculated that in a normal average individual the pressure on the articulating portion of the femoral head is approximately four times the body weight each time the individual places the full weight on the foot. We can readily understand these great stresses when we remember that during the unipedal stance the force of the superimposed body weight must be balanced by the pull of the abductor muscles on the greater trochanter. Were it not for the fact that these forces act only momentarily, all femoral heads would soon disintegrate.

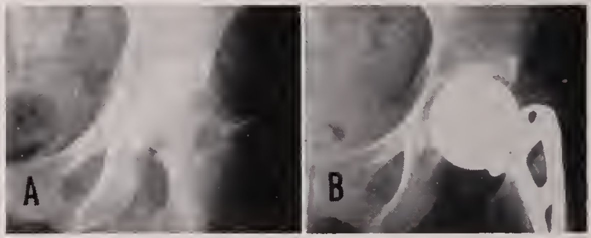

Fig. 3. A—Fracture of femoral neck. Stereoscopic views show that posterior parts of head and neck were crushed inward. Nailing would have failed. B—Seven months later. Intramedullary prosthesis has given a painless hip with good stability and good motion. The patient, who has amyotrophic lateral sclerosis, uses a cane.

A valgus position of a mould, prosthesis, or femoral neck, will enormously increase these pressures and can cause dislocation of the mould or prosthesis or disintegration of a reconstructed femoral head. Hence, it is essential in hip reconstruction to approach, insofar as possible, the normal relationship of the femoral head, acetabulum and neck.

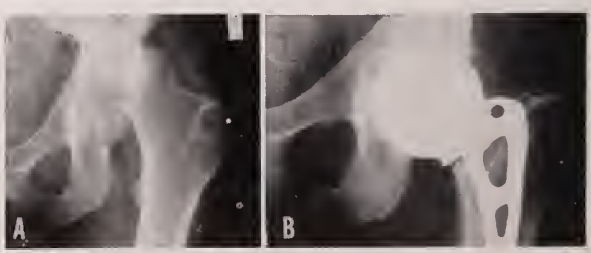

Fig. 4. A—Fragmentation of femoral head with posterior displacement of major portion. B—Use of prosthesis was the most logical method of treatment.

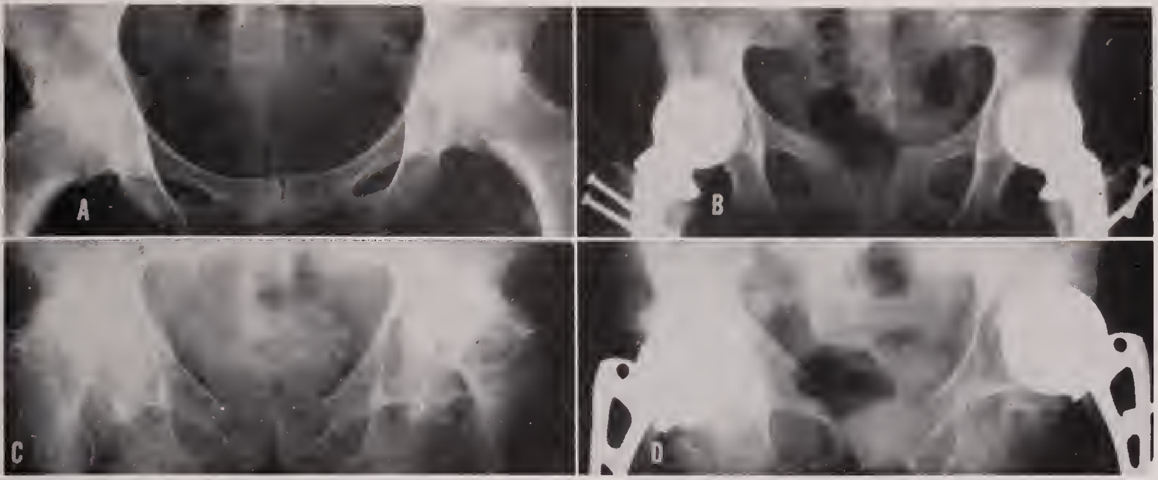

Fig. 5. A—Bilateral rheumatoid arthritis with severe pain and markedly limited motion. B—Six years after bilateral arthroplasty, six months intervening between operations. The hips are painless, there is good motion and stability; the patient walks without external support. C—Malum coxae senilis, bilateral. D—Bilateral prosthetic arthroplasty. The patient walks with a cane but is handicapped by osteoarthritis of left knee.

The compression forces on the femoral head and acetabulum can be greatly lessened if pull of the iliopsoas muscle is removed by dividing its tendon, and if tenotomies of the adductor tendons are done. This creates what is called a hanging hip. The procedure can sometimes be used in the elderly patient, not a good surgical risk for a major procedure, with assurance of quite good relief from pain.

A patient with a painful, disintegrating hip should be encouraged to use a cane in the opposite hand. It is also well to have them do this after they graduate from crutches. All patients should be encouraged to use a cane in the hand opposite the reconstructed joint to minimize stresses on that joint. Patients who undergo mould or prosthetic hip arthroplasty are never assured that all external aids for walking can be discarded although large percentage walk without them.

The importance of a cane used in the hand opposite to the painful hip was shown by the study of Pauwels. If an individual weighing 105 pounds exerts a pressure of 38.5 pounds upon a cane in the opposite hand, pressure on the remoral head is reduced from 385 pounds to 66.5 pounds. There is relief of 8 pounds actebular pressure for each pound of weight placed on the cane. It is for this reason that the elderly patient with a painful hip is frequently advised to use a cane in the opposite hand. It may give enough relief to stave off the day of hip surgery for several years. Many cases seen, however, have used canes or crutches and have reached the point where pain is so severe that acceptable existence is no longer possible. This is especially true of those with night pain. These cases should have the benefit of arthroplastic procedures. Need for such help is greater when there is bilateral hip involvement.

indications for mould and prosthetic arthroplasty

1. Prosthesis is indicated in the elderly patient with an acute fracture of the femoral neck and particularly for the fracture in which the posterior part of the head and neck have been crushed like an eggshell where nailing is very likely to fail, Fig. 3.

2. Old, ununited femoral neck fractures necessarily need a prosthesis rather than a mould. The most gratifying results are frequently obtained in these cases.

3. In this modern age with high speed automobiles, and proportionate increase in traffic accidents, we see more and more cases in which the hip has been dislocated posteriorly and a large fragment of bone has been knocked out of the head, Fig. 4. A hip such as this must be ankylosed or a prosthesis used. Obviously it would not be feasible to use a mould. A prosthesis is more acceptable to the patient than hip fusion.

4. In rheumatoid arthritis either a mould or prosthesis may be used, Fig. 5, A,B. If the femoral head is good, a mould is preferred for the younger patient.

5. In the malum coxae senilis cases, there generally is so much disintegration of the femoral head that prostheses have to be used, Fig. 5, C,D.

6. Congenital luxation or dysplasia of a hip

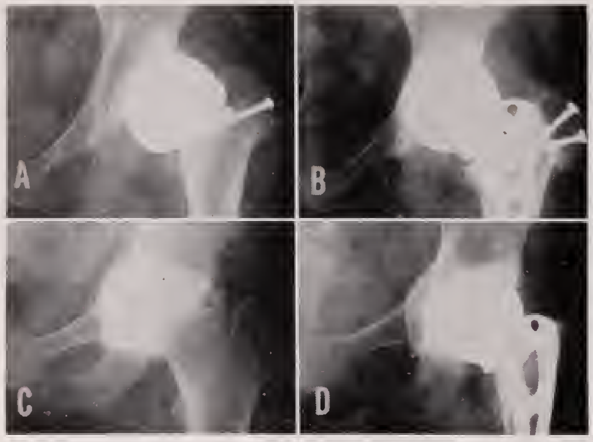

Fig. 6. A—Congenital hip dysplasia. Previous mould arthroplasty by another surgeon. Mould not deeply seated. Hip was painful and unstable. Motion was limited. B—Acetabulum was deepened and prosthesis installed. There is good motion and good stability but slight pain. The patient walks well with a cane. The other hip will be done later. C—Severe intrapelvic protrusio. The condition was bilateral. Prostheses were used, four months intervening between operations. D—About two years after the second operation. The patient walks with a cane. There is slight pain in the left hip, done most recently. There is excellent stability and about normal range of motion.

in the early years of life may not give symptoms or trouble but as the patient gets older and heavier, the weight-bearing stresses become too great and disintegration of the femoral head and acetabulum ensues. These cases can be treated successfully with a mould but great care has to be exercised to get the proper acetabular depth for the mould and it must be in correct relationship with the head and acetabulum. However, in many, so much disintegration has occurred that a prosthesis has to be used, Fig. 6, A,B.

7. Then there is the rather rare case of arthrokatadysis of the hip, generally bilateral, so-called intrapelvic protrusio. As a rule, these start in childhood or in young adulthood. As the years go on, these hips become more and more limited in motion as the head sinks deeper into the pelvis. Marked degenerative changes occur. Ambulation with crutches finally becomes too painful and even wheelchair existence is hardly possible. These cases have always been a challenge and can best be handled by leaving the femoral head in the acetabulum, fixing it in the neutral position by driving bone pegs through both acetabular walls and the femoral head. The head is cut off flush with the outer rim of the acetabulum. Then the head is drilled out until proper depth is obtained and there is a suction fit for the prothesis. The outer shell of the head, in due time, will incorporate itself in the acetabular wall and further intrapelvic protrusio will not occur, Fig. 6, C,D.

operation

The patient is placed on the well side with a thick roll in front and back. The rolls are bound together underneath the patient so as to maintain a good stable lateral position. The affected hip can be manipulated freely as desired. This posterolateral approach is also preferred because it is quite bloodless. If a wider view of the whole hip joint is necessary, such as for complete capsulectomy in those cases of long standing disease, this can readily be obtained by cutting off the greater trochanter with a Gigli saw but leaving the adductors attached to the trochanter. After completion of the operation, the trochanter is reattached in the desired position with two wood screws.

It is important to place the prosthesis in as normal a position as is possible. The femoral neck, either before or after dislocation of the head, is cut off with a Gigli saw. The saw is started about three-fourths inch proximal to the lesser trochanter and comes out at the base of the greater trochanter. The posterior part of the femoral neck is left a little higher than the anterior part so as to give some anteversion to the prosthetic head and neck. The slot for the prosthesis should have the base seated just a little posterior to the anterior margin of the greater trochanter. The medial part of the prosthesis collar should rest on the femoral calcar well anterior to the lesser trochanter. Fig. 7 illustrates these points.

In cases in which it is desirable to get rid of a good deal of compressive force in the acetabulum, the lesser trochanter, into which the iliopsoas muscle is inserted can readily be osteotomized and allowed to displace up. In old pathologic hips the adductors are usually severely contracted. These are tenotomized subcutaneously and the puncture holes made by the tenotome sealed with cotton and collodion dressings.

In cases in which a capsulectomy has been done, it is best to put on a short plaster boot with a cross bar at the malleolar level to keep the hip from rotating to prevent it from dislocating. In those in which a strictly posterior approach is made, there is no danger of dislocation except if the hip be severely internally rotated. In these cases 5 or 6 pounds of traction to the leg and some long sandbags along the leg for a few days are sufficient for immobilization and comfort. In three to four days, the limb is placed on an arthroplasty splint and exercises with pulleys and weights are started. As a rule ambulation with crutches is started in seven to ten days. In cases with fresh femoral neck fractures in which prostheses have been used, and especially in the elderly patients, it is best to get them in the wheelchair within a few days and start weight-bearing in a walker a few days later.

complications

One of the serious complications is dislocation of the mould or the prosthesis. This can occur more readily in cases where the Smith-Petersen approach is used and if a capsulectomy has also been done. With a high degree of external rotation, dislocation of the prosthetic head or of the mould may occur. It also may happen if the greater trochanter has been replaced with wood screws and for some reason they pull out. The head will then readily dislocate. I have seen this occasionally in patients who become mentally confused.

Infection, of course, is always with us, but with speed in the operation, attention to asepsis and avoidance of hematomas, the percentage of infections is minimal. If it does occur, drain down to the prosthesis or mould but do not remove it. Get a culture immediately and use the appropriate antibiotic in heavy dosage. Most of these cases will come out all right.

Intrapelvic protrusion of the mould or prosthesis is a factor which may lead to pain. However, since using the technique of making a hanging hip by removing the compressive forces exerted by the iliopsoas muscle and the adductor muscles, we have seen less of this complication.

Postoperative calcification about the hip joint has not been a factor in compromising the end result. Liberal use of oxycel gauze prevents it.

There are some patients with excellent fit of the mould or prosthesis, who have good passive and active motion who still complain of pain. These cases defy explanation.

summary

Fascial arthroplasties have been abandoned because superior results have been obtained, during the past 20 years, with mould and prosthesis arthroplasties. Use of prostheses has increased since 1949, eliminating femoral head absorption and limitation of motion from calcium deposits. For cases in which mould arthroplasty is indicated, the deposits may be prevented by use of oxidized cellulose gauze. Various prostheses have been developed but the intramedullary type now gives best results.

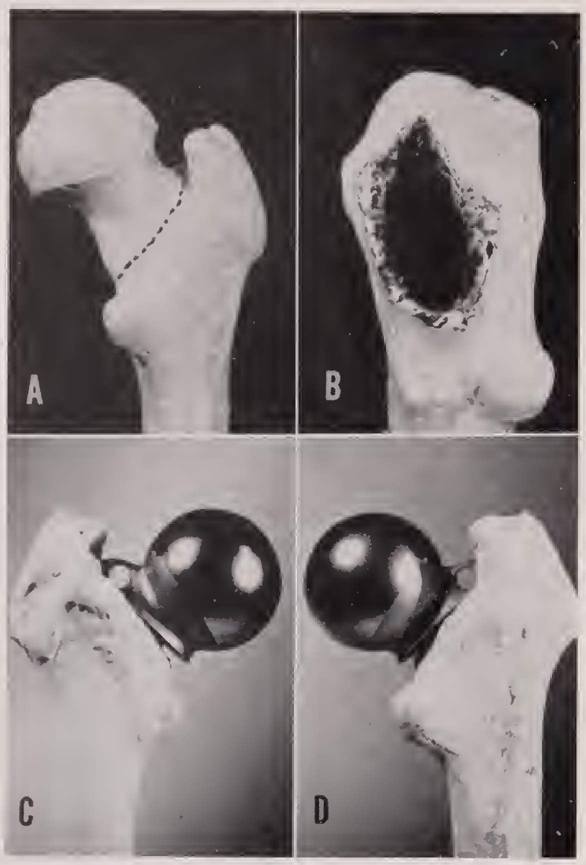

Fig. 7. Plaster model demonstration. A—Posterior, showing line of osteotomy. B—Position of the slot created for reception of the prosthesis. C—Anterior, prosthesis in place but not driven home. When this is done the collar rests firmly on femoral calcar. D—Same, posterior view.

Excessive stress in some cases may be relieved by dividing tendons of the adductors and the iliopsoas. Stress is increased by abnormal placement of the reconstructed or replaced head and may be followed by absorption or dislocation. Anatomic relationships should be followed as closely as possible. Statistical analysis has not been included in this paper. ■

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Psychiatry--Specialty or Special Way?

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Recently, general physicans have become accustomed to thinking and working in the field known as psychiatry. This has been a radical change over the past few years, quite distinctly different than one might have believed to be a possibility were one to have looked ahead 25 years ago when I entered the practice of medicine in Portland.

A number of factors have brought about the changes in attitude that general medicine now has toward things psychiatric. That medicine as a whole, that men in general practice in particular, have too long neglected the field is obvious if one looks at the whole field of mental health and illness at the present time. It has always seemed significant to many of us that of all the various illnesses known to ancient and modern man, none surpassed in magnitude that of mental disease. Yet of all these ills, none seemed to absorb less interest, less attention towards treatment, and certainly less concern about prevention, than mental illness, and by *mental illness* I refer to any emotional, mental or psychiatric disorder.

Consider, if you will, these facts as obvious reasons why mental illness should be of real concern to the man in general practice:

(1) Annually, it takes in excess of 1.5 billion dollars to care for over 16,000,000 mentally ill people in this country.[1]

(2) Oregon itself spends between 45 to 50 million dollars each biennium.

(3) People demand that something be done about these problems, and turn to all sorts of non-medically oriented people, or even quacks, for help when they are neglected by physicians.

(4) Current research in the fields of neurophysiology, clinical psychology, and neuropsychiatry, indicates that the physician is in the very best position to treat emotional and mental illness along with physical illness.

(5) Only the physician is truly trained to *treat*, and in most instances only the physician is legally qualified to treat, a fact that the majority of people have overlooked or disregarded.

(6) If one considers it extensively, there is not a vast difference between what used to be called the art of medicine and what is now sometimes referred to as psychotherapeutic medicine.[2]

But presently, with the tranquilizers, the antidepressants, and the other therapeutic adjunctive tools to use and make him feel he's doing psychiatry, the average physician is still not obtaining exactly that which would be of greatest benefit and service to the emotionally and mentally ill people. He is still not utilizing the most valuable possessions he has, *his training, his compassion, and his ability to deal with people on a therapeutic basis.*[3]

contribution of pioneer physicians

It is obvious, therefore, that many of us in the field of psychiatry might ask of ourselves occasionally "Should psychiatry really be a specialty, or might it not be considered a special way of dealing with people by those in clinical medicine?"

At first this may seem a somewhat odd question, for there are some 7000 or more physicians who are diplomates of the American Board of Neurology and Psychiatry, and there are always more seeking recognition. Why ask the question?

I think an answer, easy to understand, might lie in the consideration that the practicing psychiatrist today is not doing too many things that are radically different from what the real family physician did for his patients 85 to 100 years ago—and his was a real contribution, considered a significant one in the history of medicine and doctor-patient relationships.

The family and country physician, serving at a time when a vast country was developing, and when people on the frontier of this development needed the most, took not just good physical care of his patients, but entered into the family problems, handled the personal insecurities that people developed, helped the people adjust to new communities, and aided in the first big breaks that came in the industrialization of America. Employment problems were

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Dr. Dickel is Associate Clinical Professor of Psychiatry, University of Oregon Medical School.

considered, drinking problems were understood, the sexual problems of a Victorian age were thought through and dealt with. There were many problems that the family physician took into account, and handled, because it was part of his business. For years the physician, in general practice, in a city or in the country, thought nothing of handling his patients in this way. What did he have, besides his small assortment of drugs, a few instruments, and a dozen or so procedures? We might list these:

(1) Excellent knowledge of each family he served.

(2) A broad acquaintance with the individual patient's home, his background, his job relationships, and his activities in the neighborhood and community.

(3) A thorough understanding of that individual's physical condition and health.

(4) And from knowing him as a neighbor, or as a friend, a complete awareness of the individual's emotional and personality reactions under a variety of circumstances.

In other words the physician then had the elements of what makes up the modern psychiatrist's basic study in any individual, namely, the physical, intellectual, emotional, and environmental factors, all of which are the ingredients studied carefully in appraising the modern psychiatric patient, and are the factors which are used in formulating and working through a treatment program.[4]

skill of the family physician

Equipped with this information at all times, it was relatively easy for the family physician to treat any of the disorders brought to him, regardless of the complaint, be it of a physical nature involving trauma or infection, or simpler problem carrying with it many emotionally-laden factors, such as an anticipated death in the family, a deformed child, a philandering husband or son, or a loss of some function or part of the body. He developed great skill in helping people meet all those problems that are difficult for many of us at certain times in their life. Each of these, the family physician handled daily, hourly for that matter, because he enjoyed—

(1) A good solid rapport with the patient and the family.

(2) The advantage of having people talk easily to him, for they knew him and were used to communicating with him.

(3) The trust and confidence these relationships bring about.

(4) The added advantage of being able to encourage, just letting time itself help work things out. (The physician today feels public pressure to hurry).

If you have had an opportunity to look at the roots of what is called psychiatric treatment, you will have noted a variety of elaborate and often time-consuming procedures. But if you were to study carefully, you would observe that the initial steps, at least, can be listed according to Batten as:

(1) Establishing rapport, noting particularly how the complaints are made.

(2) Encouraging ventilation, winning confidence rather than working for immediate results.[5]

Comparing these two last lists, gives you some ideas as to why many of us look at modern psychiatry not so much as a specialty within the wide field of medicine, but rather as a way of practice that could, in many respects, be adopted by the person in general medicine at the present time. It could be a way of looking at, evaluating, diagnosing, and then treating people who are patients, in a manner significantly reminiscent of that of the old family physician.

psychiatry's opportunity

The age of specialization did away with the old family doctor. Perhaps this explains why modern psychiatry came into its present role, increasing from several hundred psychiatrists in 1910 to some 10,000 in 1962. Perhaps it came into being because the specialist was ignoring the family point of view in his patients. Perhaps it came into being because these patients were demanding from someone in medicine the understanding, the compassion and the mutual confidence they had enjoyed with their family doctor before the pressures of scientific advancement and the austerity of the modern scientist made medicine what it has been for the past 40 years.[6]

But I am quick to point out that there is inherent in medicine and the basic doctor-patient relationship the foundation for real assistance in preventing or ameliorating physical, emotional and mental illness. In emotional and mental illness, just as in physical illness, this basic patient-doctor relationship must be encouraged and improved on. It must be made a more intimate part of every physician's care of each of the patients with whom he deals.[7]

Truly it can be said that today we do not know exactly what causes any psychiatric disorder. Oh yes, indeed, we know some reasons why people drink, but we don't really know what makes an alcoholic. We know that schizophrenia has disturbed psychological patterns and some biochemical changes, but we cannot explain schizophrenia etiologically at the present. We know psychoneuroses somehow come from disturbances in childhood but which disturbances make psychoneurotics and which spur people on to real success?

If we do not know the exact etiology of disorder, we must continue in psychiatry, as in all branches of medicine, treating many disorders empirically. This does not mean a slip-shod method by any means, but rather we recognize that we must bring about remissions, reversals, and benefit in many conditions by approaching each individual case in an individual way, applying the total knowledge of medicine scientifically, but in a humane and compassionate way.

the physician's attitude

In professional relationships many physicians have acquired (in some instances, perhaps, *inherited*) unusual adeptness at handling people who are ill and are patients. Some physicians find they can do this after some guidance and training in the field. But there are still many physicians who will never help patients who have any emotional or mental problems, even though such patients may constitute a half to three-fourths of their practice. These are the physicians whose own emotional or mental life is not in itself healthy—who have prejudices, misconceptions, doubts, and even fears of anything having to do with the mental or emotional aspect of their fellow human beings. These are the physicians who often are actually afraid that a patient in some crisis of life will become temporarily dependent on them, or who are overly cautious in relating to a patient because of the emotions that might come forth. Usually these are the same doctors who are always dubious of the warmth and affection that most patients can have for their physician.

We recognize that one physician's concept of psychiatry will differ greatly from another's. To some, psychiatry will always be the branch of medicine that isolates itself to those communities run by the State for the seriously mentally ill. But to other physicians, who are broad minded, more forward thinking, and thoughtful of their fellow humans, psychiatry may be a way of approaching people, of dealing with people, and of treating patients, regardless of what their illness may be.[6]

Therefore it seems appropriate to point out that how a physician does things is more important than what he does. No matter what area may be your field of medicine most of you, in your rounds, are probably utilizing presently a psychiatric approach whether you realize it or not, and whether or not you are dealing with emotionally or physically ill people. A number of years ago, Frank DuBois pointed out that all psychiatric work is re-educative—that it uses understanding, retraining and reconditioning.[8] All physicians use these in some illnesses, but this approach can be expanded and used for any person who is having any type of medical difficulty. Just listen to these points that DuBois drew up as simple procedures that constitute the heart of psychotherapeutic medicine, and as they are read through, think how they actually could constitute the core of general practice:

(1) Assisting the patient organize his daily routine so that it affords good balance in work, rest, exercise, and play.

(2) Allowing the patient to get certain things off his chest in your presence so that he knows that here is one person to whom he can communicate certain personal things.

(3) By using or advising medication, rest, vacation and other adjunctive procedures, assisting the patient in temporarily relieving stress and strain.

(4) Assisting the patient to learn and understand why he has symptoms when he is tense, anxious, angry, or emotionally disturbed, by telling him in plain, simple language what modern medicine knows about the biochemistry, the physiology, or the psychology of the nervous system, of the emotions and their reactions. At least making it clear to the patient that these symptoms are real, that they are tangible and that they can be dealt with when they are understood and properly coped with.

(5) Taking time and making the effort to point out to the patient where he needs to improve, and then teaching him how this can be done so that the habits which are injuring or harming him can be changed.

(6) Assisting the patient in assessing, not only his physical, but also his emotional and mental health, and then pointing out how certain

factors can be improved if necessary.

(7) Making sure that you get across to the patient the value of new interests at various ages in life, interests which are themselves tonics that don't necessarily come in bottles.

(8) All through this making helpful suggestions, giving praise and encouragement as the patient shows improvement or gains.

(9) It has been said, "By the examples of his own attitudes and actions, the physician demonstrates that a person can get well, can be well adjusted and can be a stable person". We believe a part of every physician's strength is being able to transmit to his patients his own basic strength. With this goes the desire and courage for the patient himself to improve.

(10) Never to be forgotton as a valuable adjunctive to every physician's program, is the help he can give the patient in defining or redefining the spiritual values he needs to develop. The physician need not be a seriously religious person himself, but he must recognize the part religion plays in the individual patient's life.

It is our belief that were these simple things done by each physician for every patient, there would be far less emotional disorder. There would be real improvements in the field of mental disease, and the community of that physician would enjoy the beginnings of good mental health.

I once said to a group of physicians that I was sure they got tired of listening to some of us give our "spiels" on mental health, but that I felt if I personally changed the thinking of just two doctors each year, and those two doctors helped 50 different emotionally ill patients in the next two years, this alone would be a greater saving in disability than we see in polio in our whole country each year.

As I commented above, nobody knows the real cause of mental illness, and nobody knows the real measures that will prevent it. If as a nation, if as a culture, we are ever to even try to eliminate mental illness and emotional disorders, everyone must help. But not until medicine itself grows sincerely interested and takes the initiative in this whole program, will any real headway ever be made. Isn't it significant that only this fall the first A.M.A. Congress on Mental Illness took place?

a special way

Twenty-five years ago, psychiatry might have been an isolated specialty, fifteen years ago it looked attractive to others. Today psychiatry is rapidly becoming an understood, a utilized, and a beneficial part of every physician's approach to his patients.[9] Utilized a bit farther, use of it in a sensible sort of way, so that the basic elements are properly handled, psychiatry could fade from being a prominent specialty, to being a very special way, an understandable way, for a physician in practice to handle his patients.

I am not here to sell you "psychiatry"—the drug companies have done well with this. Nor would I ask you to believe that psychiatry is actually as simple as I may have implied. But I am here to convince you of a point of view, one basically important for all of medicine.

We obviously cannot turn the clock back one hundred years and restore the old family physician's unusual but beneficial manner of dealing with his patients. But we can bring into medicine the essence of the family physician's doctor-patient relationships.[10] We can utilize them in a modern setting so that as physicians we are giving the guidance, the warm attention, the treatment the patient justly deserves. This can and must be done with all the humaneness, the compassion and the attention to people's feelings that we in medicine can muster. This and only this will restore the confidence and the belief in the medical profession that our patients once had for us. Unless we do this sincerely and soon, we may never have the same opportunity. Of this I am firmly convinced.

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Pulmonary Physiology in Clinical Practice

III. Ventilation-Perfusion Ratios, Diffusion Impairment, and A-V Shunts

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There are four potential causes of interference with the movement of gases between the atmosphere and the arterial blood. As outlined in previous articles, these include abnormalities of: (1) ventilation, (2) ventilation-perfusion ratios, (3) membrane permeability (diffusion), and (4) arterio-venous shunting. Those diseases which aggravate any of these causes may produce hypoxia and, in the case of two of the four mentioned, hypercarbia.

The first of this group, ventilatory abnormality, was the subject of the preceding article of this series. The remaining three include the distribution of gas and bloodflow to the lungs, impairment of the permeability of the alveolar-capillary membrane, and shunting between pulmonary arterial and venous systems. These will be considered in the following paragraphs.

ventilation-perfusion variations

The efficiency of gas exchange is greatly affected by the relationship of alveolar ventilation to bloodflow in different regions of the lung. As was stated in the introductory article, high ventilation to bloodflow ratios produce high O_2 and low CO_2 concentrations in the alveoli where this relationship is present, and in the blood flowing by them. These units contribute high partial pressures of O_2 and low partial pressures of CO_2 to the mixed alveolar gas and the mixed arterial blood. Conversely, alveoli with low ventilation to bloodflow ratios contribute low O_2 and high CO_2 partial pressures to the mixed alveolar gas and the mixed arterial blood.[1,2]

Because of the shape of the oxygen dissociation curve for hemoglobin (Fig. 1), alveoli with high ratios of ventilation to bloodflow do *not* compensate for those which are hypoventilating in relation to their bloodflow. For example, an alveolus that is able to maintain an oxygen par-

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From The Institute of Respiratory Physiology, Firland Sanatorium, and the Cardio-Pulmonary Laboratory, Providence Hospital Heart Center, Seattle.

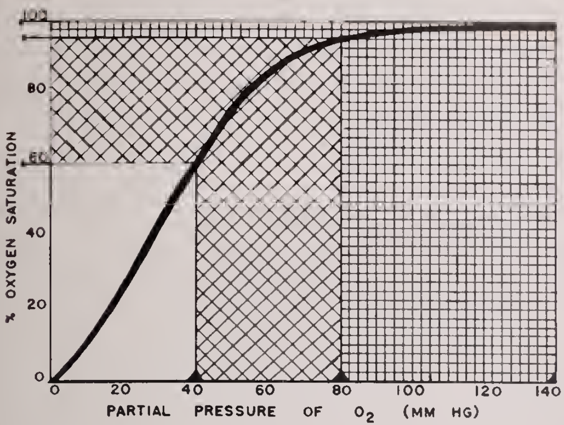

Fig. 1. Oxygen dissociation curve for hemoglobin. With increase of oxygen tension from 80 to 140 millimeters of mercury there is only a 5 per cent rise in oxygen saturation, which is clinically of minimal importance. As oxygen tension drops from 80 to 40 mm, however, there occurs a rapid and clinically significant fall in oxygen saturation of the arterial blood.

tial pressure (Po_2) of 130 mm. Hg does not compensate for the alveolus able to maintain a Po_2 of only 50 mm. Hg. As blood cannot be hypersaturated, the blood in the capillaries flowing past the high Po_2 area cannot take up significantly more O_2 than it would be able to get from an area having a normal O_2 partial pressure. Therefore the mixed arterial blood coming from a mixture of alveoli, half having a Po_2 of 50 mm. Hg, and the other half with a Po_2 of 130 mm. Hg, will be made up of two equal portions of blood, one of which is completely saturated with oxygen, the other only partly saturated. The resulting mixture will of course be unsaturated, (Fig. 2).

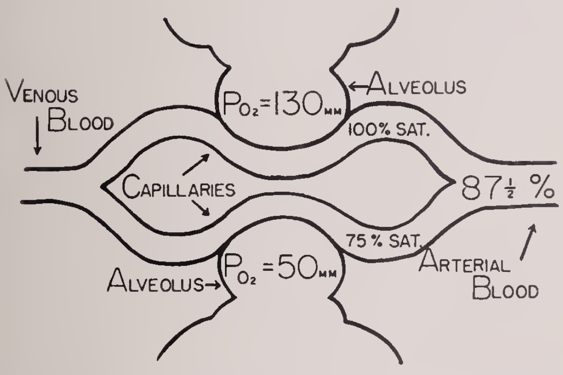

Fig. 2. Inability of high ventilation-perfusion ratio units to compensate for units with low ratios in the transfer of oxygen. If the total amount of oxygen carried away from an alveolar-capillary unit were directly proportional to the oxygen tension (or partial pressure) present, it will be seen that the mixture of blood from the two units illustrated would contain that amount of oxygen which could be carried by hemoglobin at an O_2 tension of 90 mm Hg (which would make this blood more than 95 per cent saturated with oxygen). Because the O_2 dissociation curve is not linear, however, this is not the case. Thus the blood in the capillaries from those units with high O_2 tension can only carry that amount of oxygen required for 100 per cent saturation, and the resulting mixture of this blood with that from the low units results in hypoxia.

Since the dissociation curve for carbon dioxide is more nearly a straight line, the hyperventilating alveolus *will* blow off carbon dioxide and bring the Pco_2 quite low in the blood contributed from this unit. This blood mixed with that from an alveolus with a low ventilation-perfusion ratio will therefore have a normal Pco_2, (Fig. 3).

effect of progressive disease

Progressive involvement of more and more of the lung by the disease process results in a proportionately increased number of alveolar-capillary units with *low* ventilation-perfusion ratios. When these units become so numerous that other portions of the lung with normal and *high* ventilation-perfusion ratios cannot compensate for the CO_2 retention, hypercarbia ensues. Therefore those diseases characterized by ventilation-perfusion abnormalities demonstrate a progression of respiratory insufficiency through hypoxia (which occurs first) to hypercarbia (which develops later). *No patient breathing air at sea level will have hypercarbia without hypoxia.*

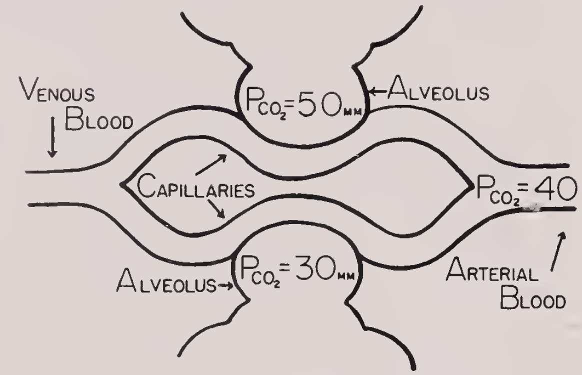

Fig. 3. Compensation by high ventilation-perfusion ratio units for low ratio units in carbon dioxide exchange. In the above illustration, capillaries from the poorly ventilated alveolus will carry blood with CO_2 partial pressure of 50 mm Hg, while blood from the well ventilated unit will have a CO_2 partial pressure of 30 mm. Since the amount of CO_2 in the blood is almost directly proportional to the partial pressure, the resulting mixed blood will have a CO_2 partial pressure of 40 mm Hg.

Ventilation-perfusion abnormalities are the commonest cause of hypoxia and CO_2 retention in clinical medicine. They are particularly prevalent in obstructive airway disease. They also occur in pulmonary fibrosis, pneumonitis, pulmonary edema, and in postoperative patients who have some obstruction of the air passages from secretions or bronchial inflammation. In addition, they have been recently reported in collagen disorders accompanied by pulmonary pathology.[3]

Ventilation-perfusion variations occur in normal man. Upright man ventilates the apices of the lung well, but when standing quietly he probably has no blood flow through the extreme apex of his lung.[4] This is due to the low pressure in the pulmonary arterial system being insufficient to elevate the blood to the apex of the lung when it is in the upright position.[5] On the other hand, bloodflow is relatively greater than ventilation in that part of the lung near the diaphragm. Ordinarily, these ventilation-perfusion variations are not sufficiently marked to cause hypoxia in normal people.

differentiation and localization

Significant ventilation-perfusion abnormalities can be suspected from findings on arterial blood gas studies. When we find his arterial blood has both decreased O_2 saturation and increased CO_2, we can be sure that a patient is suffering from either hypoventilation or ventilation - perfusion abnormalities, and he may have both. Hypoventilation can be ruled out by measuring alveolar ventilation. If hypoxia alone is present in disorders associated with ventilation-perfusion abnormalities the blood may become saturated during hyperventilation or exercise. Disease states commonly known to be associated with ventilation-perfusion abnormalities should have blood gases measured to reveal the existence and extent of pulmonary insufficiency.

Relative anatomical localization of ventilation-perfusion variations may be made by bronchospirometry, lobar spirometry,[6] or small catheter studies of gas samples taken from segmental and subsegmental bronchi.[7] The *extent* of the ventilation-perfusion defect can be measured at mouth level by several techniques,[8,9] most of which are limited to the research laboratory by the complexity of methods and equipment required.

In the preceding article the nitrogen washout and nitrogen index were described as methods which may be used clinically to detect uneven distribution of air to alveoli. Unfortunately, there is no comparable method available for determining the extent of uneven bloodflow through the various pulmonary capillaries associated with these alveoli. There are some clinical conditions, however, in which evidence of normal alveolar gas distribution, as determined by nitrogen washout, is associated with findings of a ventilation-perfusion abnormality on blood gas studies, allowing us to conclude by inference that the non-uniform distribution is primarily on the bloodflow side.[10]

diffusion impairment

Impaired membrane permeance (or diffusion) results from a reduction in total area of the alveolar-capillary membrane or from abnormally thick or non-porous membranes. Measurement of membrane permeability depends upon the assumption that there is normal ventilation and bloodflow to the alveoli. It will be evident from the preceding paragraphs that such is not always the case. Thus measurement of membrane permeability has always been plagued by ventilation-perfusion abnormalities.

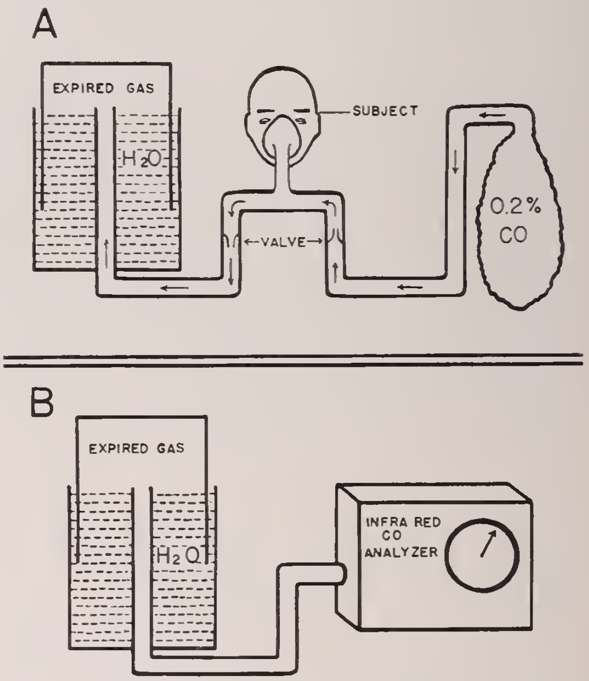

Fig. 4. Determination of permeance (diffusion) using carbon monoxide. A. Subject breathes gas containing known concentration of carbon monoxide. Expired gas is collected in large Tissot spirometer. B. Total volume of expired gas is measured, and carbon monoxide content is determined by passing sample through infra red CO analyzer. Dead space is determined by single breath nitrogen method (previously described), or may be determined by combining a known concentration of an inert gas such as helium with the carbon monoxide-containing gas breathed during the test, and applying the Bohr equation. From this information one may calculate the volume of carbon monoxide taken up per minute per unit of pressure difference across the alveolar-capillary membrane.

Only two gases, oxygen and carbon monoxide, have sufficient affinity for hemoglobin to be suitable for measuring membrane permeability. Measurement with O_2 is laborious, involving a mathematical calculation of the mean capillary

Po_2 to describe the pressure drop across the membrane.[11] Carbon monoxide is more frequently used because it is assumed that with a very low concentration of inspired carbon monoxide there will be essentially no partial pressure of carbon monoxide in the capillary blood.[12] Both O_2 and CO methods use the same basic formula. Membrane permeance is that volume of gas (O_2 or CO) taken up per minute, divided by the difference in partial pressure for that gas across the alveolar membrane, (Fig. 4).

Abnormal membrane permeability may cause hypoxia at rest. It is typically revealed at significant levels by a precipitous drop in arterial O_2 saturation on exercise. (It will be noted that this is in contrast to the hypoxia occurring in ventilation-perfusion abnormalities, which may actually be improved by hyperventilation or exercise, as stated above.) Membrane permeability defects do not cause CO_2 retention because of the high solubility coefficient of carbon dioxide. In a disease suspected of having this abnormality, determining the change in arterial saturation with exercise may be the simplest test to perform, although early changes in the membrane may escape detection by this means.

Membrane permeability abnormalities may be present in diseases which reduce the area of alveolar-capillary membrane, such as far advanced tuberculosis, and pneumoconiosis, or it may occur following extensive surgical resection. It may be the primary functional abnormality in progressive systemic sclerosis,[13] berylliosis, sarcoidosis, sulphur dioxide poisoning, bronchiolo-alveolar cell carcinoma, interstitial fibrosing pneumonitis, and Haman-Rich Syndrome.

A-V shunt

In the pulmonary physiology literature, very low ventilation to perfusion ratios have been termed "venous admixture" or "shunting effect." Normal man has a very small true shunt in his lungs, and has some very low ventilation-perfusion areas.[14] True A-V shunts are direct communications between pulmonary artery and vein, or between the right and left chambers of the heart. When sufficiently large, these result in arterial hypoxia. The lung with a normal alveolar-capillary bed for gas exchange can blow off the CO_2 adequately, and CO_2 retention does not occur. This type of defect is best determined by arterial blood gas studies which demonstrate hypoxia, while breathing air, that is not relieved on breathing 40 per cent O_2. It can be anatomically localized by such techniques as x-ray, angiography, or cardiac catheterization.

summary

Pulmonary insufficiency can occur in any disease which attacks the physiology of respiration at one or more of the four levels we have described in this article and the one preceding it. Hypoventilation and ventilation-perfusion abnormalities may result in hypoxia and in hypercarbia, if severe enough. Permeability defects and A-V shunts lead to hypoxia only.

The first three articles of this series have reviewed those basic principles of theory and concept which are useful in understanding the physiologic approach to respiratory disease. The next article will describe instrumentation and methods practical for use by the clinician in private practice for the diagnosis and treatment of his own patients. ■

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Use of Stanazolol in Severe Debility

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The need for a drug that will increase the appetite, produce a positive nitrogen balance and weight gain in severely debilitated patients, has long been recognized. Testosterone was accepted years ago as such an agent but its use has been greatly limited by its androgenicity and sodium retention. Many modifications of the chemical structure of this steroid have been developed to increase its oral effectiveness and to reduce the side effects, but still maintain the desirable anabolic effects.

The newest of the anabolic steroids is stanazolol. It is said to cause its optimum nitrogen retention at a dose of 6 mg per day orally. It is a very weak androgen, produces virtually no salt retention, and no liver damage has been reported during extensive clinical trials.

This case report demonstrates the rather dramatic effectiveness of stanazolol's anabolic properties.

CASE REPORT

A 22-year-old college student, who had been in good health, received a severe head injury during a college baseball game, May 31, 1960. He had a large subdural hematoma that caused several weeks of unconsciousness in spite of adequate neurosurgical care. During this time a tracheotomy was done and it was necessary to use a catheter in his bladder.

After he regained consciousness, he was unable to say more than one or two words at a time and has never since been able to walk. He is now, however, able to understand quite a bit of what is spoken to him, and can answer yes and no to questions.

During his long period of convalescence he developed urinary tract infections and formed and passed several kidney stones. He also developed hydrocephalus which necessitated surgical drainage of the ventricle to relieve intracranial pressure. In January, 1961, he had a urinary calcium output of 430 mg in 24 hours; in September, 1961 it was 450 mg in 24 hours. By November his weight had decreased from 160 pounds to 99 pounds. He would not eat and seemed to have lost all interest in his surroundings. He was having episodes of severe pain once or twice weekly, due to passage of renal stones. On November 24, 1961, blood studies showed total proteins 6.38, albumin 3.97, globulin 2.41, A/G ratio 1.64, Hb 12.48 and hematocrit 39.

On November 25 he was started on two mg stanazolol* t.i.d. On December 26 his weight was 116 pounds and blood studies showed total protein 7.29, albumin 5.47, globulin 1.82, A/G ratio 3.01. The urinary calcium output had dropped to 177 mg in 24 hours.

By January 25, 1962 his weight was up to 120 pounds and his appetite was greatly improved. The 24-hour urinary calcium output was 182 mg, Hb 14.97, hematocrit 45. By April 25 his weight was 136 pounds in spite of several episodes of nausea and vomiting brought on by passing of further kidney stones.

Following this improvement, the catheter for ventricular drainage ceased to function and he had two or three epileptiform convulsions due to increased intracranial pressure. It was necessary to return him to surgery to re-establish drainage and relieve the intracranial pressure. In spite of these complications he continued to gain weight and by the end of May, 1962, he was up to 140 pounds. He was up daily in a wheelchair and enjoyed watching television. He continued to eat well, maintained his weight, and had less trouble with renal calculi. He was kept on 2 mg of stanazolol t.i.d. during this six-month period.

summary

It would appear from this case report that stanazolol was of considerable benefit in halting the downhill course of this severely debilitated patient. It may be a valuable tool in the management of patients who have become debilitated from prolonged illness. ■

4351 S. E. Hawthorne Blvd. (15)

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*Available as Winstrol from Winthrop Laboratories.

Chemical Treatment of Metastatic Malignant Teratoma of the Testicle

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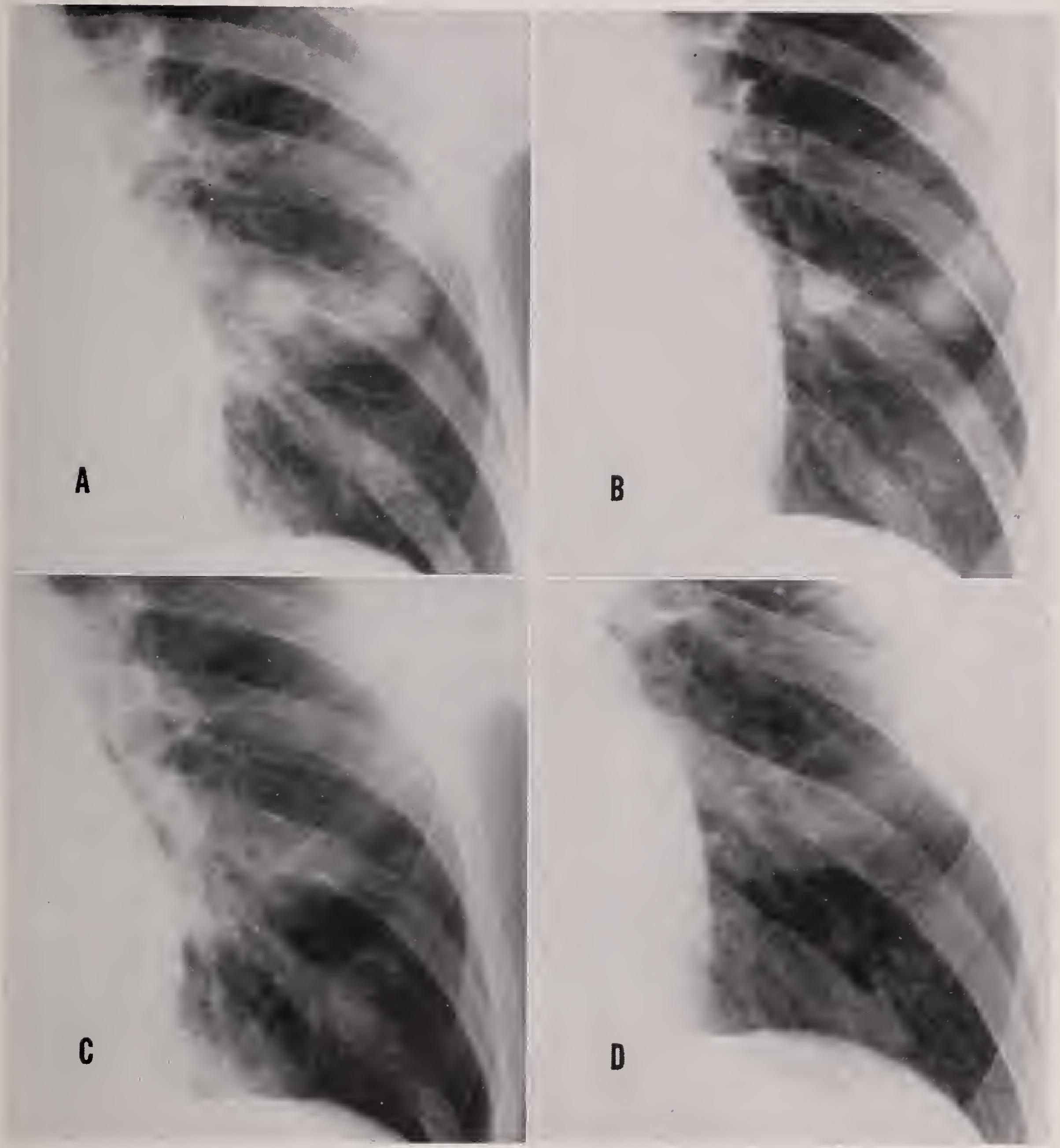

Fig. 1. A—April 5, 1962. Films taken in February and March were almost identical. B—April 30, 1962. C—May 18, 1962. D—September 6, 1962.

The report by Li et al. on treatment of 36 patients with advanced cancer of the testicle is worthy of consideration.[1] Their patients were treated by various combinations of anti-cancer chemicals. Many showed improvement and temporary remissions. At least three of the cases showed resolution of pulmonary metastases and have remained well for nine to eighteen months. A further and larger series to be reported by Whitmore is said to maintain about a ten per cent "permanent" value from such combination treatment.

Having a case with pulmonary metastases, I was stimulated to try four different drugs on my patient, but thus far have withheld the fourth (actinomycin D) because of his progress with the other three.

CASE REPORT

A 26-year old white male reported on February 20, 1962, with history of pain and enlargement of the right testicle for at least six months and possibly one year. I had transplanted this testicle in 1948, using a modified Bevan procedure, after conservative methods had failed to cure the non-descent. On February 28, 1962, the enlarged, painful testicle was removed. When examined, the tumor proved to be malignant, with elements of embryonal carcinoma showing invasion of the epididymis, spermatic cord and pampiniform plexus. X-ray of the lungs showed metastatic carcinoma of the left base.

On March 9 the patient was started on a regimen of a 1 mg tablet of chlorambucil t.i.d. for one week to a total of 30 mg. X-ray on March 19 showed no change, and on that date 0.5 gm of furacin t.i.d. for one week for total of 14 gm was prescribed. An X-ray on April 5 showed no change. On April 6 he began taking 2.5 methotrexate t.i.d. for eight days to 60 mg. The same dose was then given on alternate days until a total of 120 mg. had been reached.

An x-ray on April 30 showed evidence of decrease in size of part of the metastatic lesions. On May 8 I started nitroturazone, 0.5 gm t.i.d. and gave to total dose of 12 gm. X-ray on May 18 showed almost complete disappearance of tumor metastases from the lung. Beginning May 22, 2.5 mg of methotrexate was again given t.i.d. on alternate days for a total of 60 mg.

On June 19 and July 11, chest films showed two residual lesions. One, a centimeter in diameter, was at the left base laterally. The other, seen in the lateral view but not in AP projection, was at the level of D 8, and was within the shadow of the left ventricle. September, October, and November films indicated complete resolution. The patient was clinically well, at least for the time being.

White cell counts were run every two weeks and never were depressed. The only adverse symptom experienced was some hypersensitivity of both feet while on the second course of nitrofurazone.

discussion

As far as can be ascertained from timing as interpreted from x-rays, the improvement did not occur until the third drug, methotrexate, was administered. Experience of others with this drug alone has not included anything as dramatic as the improvement seen in this case.

The combination of an alkylating agent, an antimetabolite, a radiomimetic drug and an antitumor antibiotic, or various combinations of these drugs, may be of more value than any single one because of the diversity of action of these agents on the cell.

I report this case realizing well that the improvement shown by this patient may be temporary. It may, however, encourage others to try similar or different combinations of anti-cancer chemicals in this and other malignancies that have widespread metastases. I urge their use in doses well below possible host toleration so the likelihood of harm will be decreased. The good effect of the drugs, as evidenced by the result in this case is not necessarily dependent on the maximum dose tolerated by the patient.

summary

A case of malignant teratoma of the testicle, with pulmonary metastases, showed complete disappearance of visible metastases with the combined use of chlorambucil nitrofurazone and methotrexate in the minimal recommended doses of all three drugs. The drugs were used after removal of the primary tumor. ■

1110 S.W. Salmon Street (5)

Chemical Nomenclature

generic names	trade names
chlorambucil	Leukeran
nitrofurazone	Furacin
methotrexate	Methotrexate

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Saving Time with Hypnosis

LAUREN E. TROMBLEY, M.D. Eugene, Oregon

I often hear the remark, "Hypnosis may be great, but I don't have time for it." For physicians who have no time to communicate with their patients, the remark is true.

Any technique in therapy which depends largely on the projection of ideas and instructions from one individual to another requires communication on several levels of awareness. The development of these techniques of communication requires didactic and practical instruction as well as experience. Time needs judicious investment if it is to be saved. Most physicians, at first, find themselves spending more time than really necessary in inducing the hypnotic state, and eliciting various trance phenomena. However, after the initial novelty has worn off, increasing skill will permit employment of hypnosis in a confident, rapid and relaxed manner. For the experienced therapist, hypnosis becomes a way of relating to patients and enhancing other forms of therapy; *it becomes integrated into the physician's way of dealing with all disease states.*

helping the tense patient

A few examples will illustrate what I mean. Remember the last time you tried to do an adequate pelvic exam on a tense patient? You got it done, but you probably weren't satisfied that you palpated as much as you might have, and your patient was unlikely to be feeling her freshest at conclusion of the ordeal. Hypnosis can be impressively helpful here. Not every patient can achieve spectacular relaxation similar to that under anesthesia, although I've noticed this a few times, but at least the patient becomes relaxed and cooperative.

I might observe here that many physicians get very good relaxation with their patients, and they may disclaim using hypnosis. If they compare the way they handle the patient with techniques used in hypnosis, I am sure they will be astonished at the similarities.

I have found that an extra two or three minutes spent with the patient *before* the pelvic exam more than make up for lost time and energy in trying to palpate through a rigid abdominal wall. An actual hypnotic induction is seldom necessary; relaxation is the important factor, and a light, hypnoidal state will do this nicely.

I usually say something like this to the patient: "Whether or not you have had previous pelvic examinations, I would like to spend a minute to be sure you can relax your abdomen completely, because that will make the examination comfortable and speedy. In order to feel the pelvic structures easily and without any discomfort to you, these muscles," (and here I palpate the lower abdomen) "must be very loose and floppy. Now take a few easy, deep breaths through your mouth, and let everything go limp. Fine."

the patient may lead

Very often the patient will now close her eyes without any specific suggestion for doing so, and the abdominal musculature can be felt to yield to the gently palpating hand. Most patients are willing to cooperate, and will sometimes lead you in the induction of hypnosis. If this is recognized, you can take the advantage and reinforce what the patient is already doing for herself.

I continue, "You're doing very well. If I pick up your wrist now and let it drop, it should fall to the table like a wet rag. Good. Now continue to relax deeper with every breath. What you've done will make the examination very easy for me, and it will be a better one because of your cooperation. I'm going to step out of the room for a moment while my aide prepares you for the examination. Lie there comfortably and move only as much as is needed to be positioned properly. Leave your eyes closed if you like, but even if you open them that shouldn't disturb your relaxation."

That last statement is really debatable, because a hypnoidal state is usually terminated when the eyes are opened. However, the patient is given a choice, and is likely to leave her eyes closed.

After I return to do the examination, I let the patient know what I'm about to do before I do it, and I give occasional reminders about abdominal relaxation. Incidentally, a warmed speculum should be a common courtesy, not a special favor.

Rarely, a resistant patient remains tense, has her knees together, and her hands gripping the table. A great deal of patience is requisite here, because it would be tempting to be a little curt, adopting a "stop this childishness and let's get this over with" attitude. Such an approach effectively converts a nervous patient into a petrified one.

Try coming around to the side of the table before you touch the patient at all. Say something that indicates you understand her apprehension and place your hand on the outside of her draped knee and ask her to push against you. In her attempt to defeat the examination, she will usually respond to a request to do something against you, and she will move her knee outward, which is precisely where you want it. This kind of manipulation of resistances is easier to describe on paper than it is to do in practice, and requires some trial and error, as well as the cultivation of empathy with patients who are irritating.

other procedures

A couple of other procedures deserve mention without elaboration because of the similarity in technique to pelvic examination. These are sigmoidoscopy and indirect laryngoscopy. Both require complete cooperation and understanding from the patient. The physician can induce palatal and lingual relaxation and ablate gagging by creating a hypnoidal state in the patient. (Deep hypnosis is almost never required in these routine office procedures.) In any proctologic examination, tact and gentleness are necessary to get anything done, but the added benefits of hypnosis are patient comfort and ease of examination.

In therapeutic, as well as in diagnostic procedures, hypnosis often saves time for doctor and patient. Excepting very small children, with whom you cannot communicate effectively, myringotomies can be performed in the office with hypnoanesthesia. This can be a real time saver, even for the brave souls who give general anesthesia in their offices. Not every patient will achieve complete anesthesia of the tympanic membrane, but the threshold is raised and total response to pain is diminished to where it is tolerable and quickly forgotten.

Another example is the use of the nasogastric tube. Many patients take the tube very well, with the help of explanation and reassurance, but with the few who are very apprehensive it can be a mess. If the patient looks rather jumpy, a few minutes to induce a medium trance are well spent. Menopausal patients respond well to being taught techniques to overcome their symptoms, in conjunction with hormone therapy. An ideal place to introduce this is during the relaxation induced with the initial pelvic examination and Pap smears.

Hypnosis is suited to many orthopedic procedures as an aid to easier reduction of fractures or dislocations, and the relief of pain accompanying bone or ligamentous injuries. The benefit of muscle relaxation is obvious here. Pain and sympathetic neurovascular changes have been relieved by hypnosis, and of course not only time, but the function of an extremity is saved in cases like this.

emotional problems

Many emotional problems are amenable to office psychotherapy employing hypnosis, and are within the potential of many specialists who have taken the trouble to acquire appropriate training. There is now, in its earliest stages, a renaissance of psychiatry in all the disciplines of medicine. Soon, postgraduate courses will be available, particularly in psychosomatics, in centers all over the country. The acquistion of knowledge takes time, but it is paid back with interest.

Hysterical patients—those with milder conversion reaction—traditionally respond rapidly to hypnosis, but I personally believe they should not be relieved of their symptom and discharged. It is wiser to allow the patient some latitude in getting rid of his difficuly, and he should be followed at intervals in the office. Some conversion reactions are long standing, and may be impossible to treat satisfactorily, even by experienced psychotherapists.

conclusions

Even the most elementary office psychotherapy, such as ventilation and reassurance, is still too time-consuming in the estimation of many practitioners, but I feel we shirk our responsibility as complete physicians, regardless of specialty, if the patient looks to us with trust and confidence, and we reject his plea, whether verbal or not, for emotional help.

It is not hypnosis itself which is important to the sound practice of medicine, but many of the applications of psychiatry, of which hypnosis is one, which are long overdue in our daily contacts with patients. In this kind of psychosomatic climate, we'll be saving much more than time for our patients and ourselves. ■

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Benign Gastric Ulcer

Prognosis Following Non-Operative Treatment

G. E. TOLSTEDT, M.D. / J. W. BELL, M.D. Seattle, Washington

Benign gastric ulcer is now recognized as a disease separate and distinct from duodenal ulcer.[1] The result of this distinction has been more critical evaluation of indications for surgical treatment of gastric ulcer. In addition to the classic indications of hemorrhage, obstruction and perforation, Dworken et al[2] list six significant factors to be considered when selecting the method of treatment of a benign gastric ulcer: history of previous hospitalization for ulcer, back pain associated with epigastric pain, continuous symptoms for one year or more prior to admission, gastric acidity over 60 units after histamine, failure of symptoms to disappear completely during the first week of therapy and history of perforation. It is clear that the indications for surgery of gastric ulcer have been extended beyond those of duodenal ulcer.

The careful study of Larson et al[3] documents the high recurrence rate following medical management of the small gastric ulcer. In spite of this discouraging outlook following medical therapy, there remain in most series[4] groups of 20 to 30 per cent of patients who heal their gastric ulcers promptly and remain in good health, apparently cured. Can these patients be predicted early in therapy? Careful analysis of a series of medically treated, gastric ulcer patients is presented here with emphasis on that group of patients apparently cured. The purpose of this study is to document those factors which will enable the physician to predict a successful outcome following non-operative therapy of gastric ulcer.

clinical material

The medical records of all patients treated for gastric ulcer at the Seattle Veterans Administration Hospital during the years 1951 through 1959 were reviewed. One hundred and forty-four cases were found. Of these, 74 had been treated only by medical means during the initial hospitalization and the remaining 70 had been treated surgically on the initial hospital admission. Those 74 patients who had responded to medical therapy and improved sufficiently to be discharged from the hospital without surgery were selected for follow-up evaluation.

Information was obtained on all but one patient. This one case was followed for ten months only. All other living patients had two and one-half to ten years of follow-up. Twenty-seven per cent of the patients were followed by questionnaire. Information was obtained from death certificates on 7 per cent of the patients. The remaining patients were followed by personal interviews or by study of hospital records following readmission.

hospital routine

Benign gastric ulcer is treated with hourly antacids, anticholinergics, bland diet and hospitalization until the ulcer is healed as shown by x-ray. Following this, careful recommendations are made to the patient for his continued treatment and he is referred to a private physician. Less than one-third of these patients subsequently seek private medical care and the self-treatment practiced by the remaining patients without the benefit of close supervision is probably less than ideal or non-existent. In spite of this inadequate post-hospitalization care, the initial treatment of this group of patients was ideal and recommendations for further treatment were carefully given.

Determining the presence of malignancy in a gastric ulcer is always a diagnostic problem; however, in this hospital combined evaluation with upper gastrointestinal x-rays following a trial of medical therapy, gastric cytology, and gastroscopy has been very successful. Gastric cytology is a highly developed technique at this institution. There has been only one false negative case. This patient was discharged with a diagnosis of benign gastric ulcer and subsequently was proven to have gastric carcinoma. Carcinoma of the stomach is excluded from this study.

results

Operated Group. Twenty-three (31 per cent) of the 74 patients were treated by partial gastrectomy, at some time subsequent to their discharge after responding to medical treatment. Emergency dictated operation in 11. Three were obstructed, seven operations were necessary because of hemorrhage and one patient returned with perforation. Of the 12 elective cases, 11 were treated surgically for pain and chronicity, and one was thought to be carinomatous.

Death followed surgery in two cases. Surgery was emergent in both, one because of hemorrhage and the other for obstruction. The surgical mortality was

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9 per cent for all cases and 18 per cent for emergency operations.

Deaths. Twenty-two of the 74 patients are now dead. Death was directly related to the gastric ulcer in two of the 51 non-surgical cases; thus, the medical mortality was 4 per cent. Eight additional patients had active chronic ulcers found at post mortem examination. Thus 12, or more than one-half of the death cases had recurrent disease. Evaluation of the remaining 10 death cases reveals that autopsy was performed on only one. One patient who had had symptoms repeatedly did not have an ulcer at post mortem.

the living, unoperated group

Unimproved Group. There were ten patients alive who were unimproved or had had recurrence. In this group are included definite recurrences not subsequently treated surgically, and patients with continuing ulcer pain not relieved by therapy. Included is one patient whose asthma was so severe as to be a contraindication to surgery. This patient has been followed for five years. Operation has not been done in this group because of patient opposition and, in one case, physician opposition.

Improved Group. Ten patients are alive and improved. In this group are those patients who have had intermittent symptoms relieved by antacids but who have not had a proved ulcer recurrence or a complication of gastric ulcer.

Cured Group. In the group of 11 patients entirely relieved of gastric ulcer symptoms, eight patients had small or shallow ulcers on x-ray. Two patients had a diagnosis of gastric ulcer made on the basis of gastroscopy only. Repeated x-ray examination failed to show the gastric ulcer described by the gastroscopist as small in one case and shallow in another. In only one of these 11 cases was the initial ulcer described as a deeply penetrating ulcer. Rapid healing was typical of the cured group. The only case not completely healed after three weeks of hospital treatment was that ulcer described as deeply penetrating by the radiologist. Rapid healing was less frequent in the improved and operated group.

Duodenal ulcer was found in association with gastric ulcer in three of the cured group, four of the improved and 14 of the operated group. This high percentage of associated duodenal ulcer in the operated group is not significant since active and healed duodenal ulcers found at surgery are included as well as active duodenal ulcers shown by x-ray.

Corticosteroids were used in both cured and improved groups. There were four patients whose gastric ulcer was related by cortisone therapy. The only conclusion that may be drawn from this small group is that surgery is not indicated for cortisone-induced ulcer of the stomach unless bleeding, perforation or obstruction is present. If the ulcer is small it may heal promptly after withdrawal of cortisone. Surgery is, therefore, not recommended.

An ulcer was found high on the lesser curvature in three of the cured group and one of the improved group. This indicates that the high lesser curvature ulcer may heal well and is not in itself an indication for surgery.

A total of 30 patients (40 per cent) have benefited from medical theapy of gastric ulcer. If, however, one is critical and excludes patients who died and no post mortem examination was performed, then there are only 22 patients (32 per cent) who benefited from medical treatment.

discussion

Should all patients with benign gastric ulceration be treated surgically? Because of the success of gastric resection for gastric ulcer[5] as well as the low mortality in elective cases, it seems that this question can be answered in the negative only if we can predict with some accuracy which patients are most likely to be cured by antacid and diet therapy. This study suggests that small or shallow gastric ulcers which heal rapidly on medical therapy may be cured; other patients should be considered for surgical resection. Those patients with a small or shallow gastric ulcer, as defined by the radiologist and gastroscopist, should be treated intensively with hourly antacids and diet for three weeks and re-examined. If there is complete healing of the ulcer at this time the chances of recurrence are reduced.

This would seem to be a definite method of selecting patients for medical treatment; however, this places much of the decision for type of therapy in the hands of the radiologist. Because of this, close liaison between the clinician and the radiologist should be maintained. Small, shallow gastric ulcers, as seen by x-ray, should be visualized by gastroscopy when possible. All six factors listed above, as defined by Dworken, must be absent before a decision for prolonged medical therapy is made.

summary

1. Seventy-four cases of benign gastric ulcer which responded to medical treatment sufficiently to be discharged from the hospital were studied.
2. Twenty-three of these patients have subsequently been treated surgically.
3. Twenty-two patients are now dead, four of complications of gastric ulcer.
4. Eleven patients appear to be cured, ten patients are improved and ten unimproved following medical therapy for benign gastric ulcer.
5. Small, shallow gastric ulcers which healed promptly, were characteristic of those ulcers cured by medical therapy. ■

4435 Beacon Ave. (8)

Reference list may be obtained from the editorial office. Ed.

What happens when you eat Tomato Soup, Doctor?

The first taste of its tangy, real tomato flavor makes your mouth water and gives you a pleasant feeling of warmth.

For this reason, Tomato Soup or any of Campbell's other soups, for that matter, are one of the best ways possible for you or your patients to start a meal. They're also one of the best ways you can find to get a patient to follow a diet. Tomato Soup and Tomato Rice Soup, for instance, are temptations most patients can't resist. And, as you know, if you can help to stimulate a patient's appetite and have him enjoy what he should eat, he'll be more likely to stick to the diet prescribed.

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OREGON

Oregon State Medical Society—2164 S. W. PARK PLACE, Portland 5, Oregon

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annual meeting, September 25-28, 1963, Portland

1963 Annual Session Program in Final Developmental Stage

The Oregon State Medical Society and the Oregon Academy of General Practice are combining to hold their 1963 annual meetings in Portland September 25-26-27 in conjunction with the 37th Sommer Memorial Lecture Series. This tri-partite session should be the Pacific Northwest's most outstanding postgraduate session of the year. All activities of the meeting will be held in Portland's Memorial Coliseum beginning with the opening session of the Society's House of Delegates at dinner on Tuesday, September 24th.

The guest speakers to be presented by the Sommer Memorial Lecture Foundation will include Sir Arthur Porritt, distinguished London (England) surgeon; Francis C. Wood, Professor of Medicine, University of Pennsylvania School of Medicine; and Preston A. Wade, Clinical Professor of Surgery, Cornell University Medical College. The joint meeting will also present Walter C. Lobitz, Jr., Professor of Dermatology at the University of Oregon Medical School, who will develop a scientific sectional program on cutaneous medicine. George Saslaw, Professor of Psychiatry at the University of Oregon Medical School will develop a half-day symposium on psychiatry and mental health.

The scientific program will also include scientific sectional programs in the fields of internal medicine, general surgery, and trauma. To supplement the presentations by the guest lecturers, Ernest T. Livingstone, chairman of the Committee on Annual Session, has extended an invitation to all members of the Society to submit papers for the Committee's consideration in completing the program. Members will be asked to submit titles which can be used in each of the scientific sections. The session will again include the usual exhibits technical, scientific and art. With the availability of the Memorial Coliseum exhibit hall these three activities have expanded greatly. At the 1962 session of the Oregon State Medical Society, more than 35 scientific exhibits were presented by members of the Society and were of unusual quality. The art exhibit included participation of 70 members of the Society, the Woman's Auxiliary and members of the immediate families of members. The most recent addition to the exhibit "family" at the Society's session, the Physicians' Art Exhibit sponsored by the Oregon Physicians' Art Association has become unusually popular for both participants and visitors.

The Congress of Delegates of the Oregon Academy of General Practice will hold two sessions. The first at dinner on September 25 with its closing session at dinner on Friday, September 27th. The Society's House of Delegates will hold its second session at breakfast on September 25th and its closing session at breakfast on September 27th. The meetings of both policy-forming bodies will be held at the Memorial Coliseum.

The social highlight of the meeting will be a joint annual banquet of the Society and the Academy on Thursday evening, September 26th. On this occasion officers will be installed, awards presented with the inaugural ball to follow. The Society and the Academy will combine again on Saturday morning of September 28th for their respective annual golf tournaments.

Midyear meeting of House of Delegates

Glenn M. Gordon of Eugene, Speaker, has announced that the 1963 Midyear Meeting of the Society's House of Delegates will be held Friday and Saturday, April 26-27, at the Hotel Multnomah in Portland. As is customary, the meeting is scheduled to follow the 1963 annual meeting of the University of Oregon Medical School Alumni Association and the 36th Sommer Memorial Lectures to be held at the Medical School April 24-25-26. The meeting will open with dinner on Friday, April 26th and close with a luncheon meeting on Saturday, April 27th. Reference Committees will hold their meetings on Saturday beginning at 9:00 A.M.

Public health officers needed

Richard H. Wilcox, State Health Officer, has announced that in Oregon there are seven budgeted, full-time vacancies in the field of public health for physicians. Three such positions are open on the medical staff of the State Board of Health itself and four positions are vacant in local county or district health departments. Physicians who are interested should contact Dr. Wilcox by writing to him at the State Board of Health office, P.O. Box 231, Portland 7, Oregon. The telephone number is 266-2161. Dr. Wilcox also reports that there are opportunities for "first" and "second" year residencies in the field of public health in Oregon. He emphasizes that substantial stipends are paid for physicians who enter this field of training. More complete information regarding the public health residency programs may be obtained by writing to Dr. Wilcox.

Thirty Licensed by Board of Medical Examiners

Jon V. Straumfjord, M.D., Secretary-Treasurer, Board of Medical Examiners of the State of Oregon, announced that during a recent meeting of the Board, 30 doctors were licensed to practice medicine and surgery in Oregon:

John Charles Bigelow; Clifford Edward BreMiller; William Yeats Duncan, III; John Harold Ellison; David Gowing; Vincent Chris Hinck; Harry Arbaugh Lee; Richard Lee Mercer; Gerald Robert Nowlis; Bruce Alfred Peters; Donald Wood Sutherland; Philip Richard Trautman; Graham Marshall Watkins; Michael Frank White, all of Portland.

Hans Friedrich Fink, Wilsonville; Edward Light Goldblatt, Eugene; Donald Henry Heithecker, Milwaukie; Amir Houshang Hemmat, Wilsonville; Leonard Lancaster Heston, Oregon City; Kuoyeng Ngeh Hsieh, Pendleton; James Clair Newman, Salem; Thomas Leon Thornton, Eugene; Charles Bernard Voekler, Salem; Leon Donald Wanek, Medford.

David Elmer Billings, U.S. Navy; George Heyden Caspar, U.S. Navy; William Robert Conte, Olympia, Washington; Frederick Lawrence Goodwin, California; Winston Applewhite Mitchell, California; Charles Bruce Taylor, Illinois.

The next regular meeting of the State Board of Medical Examiners is set for April 25-27, 1963.

Board of Trustees

In addition to the state legislative proposals already acted upon, the Board of Trustees of the Oregon State Medical Society, at its meeting on Saturday, February 2, 1963, considered and established policy on twenty bills already introduced or the introduction of which was contemplated during the 1963 Oregon State Legislative Session. Given major consideration also were the policies and practices of the State Public Welfare Commission relative to administration of its Medical Aid programs.

State legislation

Regarding legislation before or to be before the 1963 Oregon State Legislature, the Board of Trustees adopted the following recommendations of the Committee on Public Policy as presented by its Chairman, Clinton S. McGill:

1. That the Society declare itself to favor the enactment of a competitive workman's compensation act.

2. That the Society support the legislation proposed by the Oregon Psychological Association to certify clinical psychologists, provided the bill is amended to provide that when a psychologist engages in psychotherapy he shall do so under the supervision and control, in each instance, of a physician and surgeon licensed to practice medicine and surgery by the Oregon State Board of Medical Examiners.

3. That the Society support a legislative proposal being sponsored by the Portland Psychiatrists in private practice which provides for the establishment of a psychiatric expert witness panel to be utilized in criminal cases where the question of the defendant's sanity is raised.

4. That the Society approve and actively support a bill to be sponsored by the Oregon Society of Ophthalmic Dispensers for the registration of dispensing opticians.

5. That the Society approve the following legislative proposals being sponsored by the Oregon State Board of Health:

a. Amendments to the Medical Investigators Act providing that one or more assistant medical investigators may be appointed in any county.

b. A bill relating to the filing of death and fetal death certificates and the issuance of burial and transit permits when the place of death or fetal death is unknown, occurs in a moving conveyance or the dead body or fetus is moved from the place of death into the jurisdiction of a different registration district.

c. A bill amending the Farm Labor Camp Act providing that the State Health Officer or his authorized representative may perform the duties required of a local health officer when such health officer is unable to act or the office is vacant.

continued on page 206

in cerebrovascular disorders well tolerated in long-term therapy

VASODĪLAN

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To relieve symptoms—renew patient outlook

Because VASODĪLAN "...appears to act directly to relax smooth muscle, with some selectivity for the smooth muscle of the blood vessels..."[2] it is concluded that spasm of the human cerebral vascular system may be prevented by this "myo-vascular" agent.[3]

In patients with cerebrovascular disease, therapy with VASODĪLAN reduces the number of ischemic attacks.[3] "Definite improvement in attitude, eating habits, personal appearance, alertness..."[1] was observed. Improvement in the accompanying vertigo and paralysis as well as a decreased incidence of headache was also noted. VASODĪLAN is well tolerated with no troublesome side effects observed at recommended oral doses.[1-4] It is compatible with other medications such as antispasmodics,[4] hormones,[4] and insulin.[5]

Dosage and administration: Oral—10 to 20 mg. (1 to 2 tablets) t.i.d. or q.i.d.; I.M.—5 to 10 mg. b.i.d. or t.i.d. *Contraindications:* There are no known contraindications to oral administration of VASODĪLAN in recommended doses. *Cautions:* VASODĪLAN should not be given immediately postpartum or in the presence of arterial bleeding. Parenteral administration is not recommended in the presence of hypotension or tachycardia. Intravenous administration is not recommended because of the increased likelihood of side effects. *Side effects:* Few side effects occur when given in recommended oral doses. Occasional palpitation and dizziness can usually be controlled by dosage adjustment. Single intramuscular doses of 10 mg. or more may result in hypotension or tachycardia. *Supplied:* 10 mg. tablets in bottles of 100 and 1,000; in 2 cc. ampuls containing 10 mg. (5 mg./cc.) for intramuscular use, boxes of 6. For complete details on indications, dosage, administration, and clinical background of VASODĪLAN, see the brochure of this product available on request from Mead Johnson Laboratories, Evansville 21, Indiana. *References:* (1) Clarkson, I. S., and Le Pere, D. M.: Angiology *11*:190-192 (June) 1960. (2) Kaindl, F.; Samuels, S. S.; Selman, D., and Shaftel, H.: Angiology *10*:185-192 (Aug.) 1959. (3) Dhrymiotis, A. D., and Whittier, J. R.: Current Therap. Res. *4*:124-129 (April) 1962. (4) Billiottet, J., and Ferrand, J.: Semaine méd. *34*:635-637 (May 20) 1958. (5) Samuels, S. S., and Shaftel, H. E.: J. Indiana M. A. *54*:1021-1023 (July) 1961.

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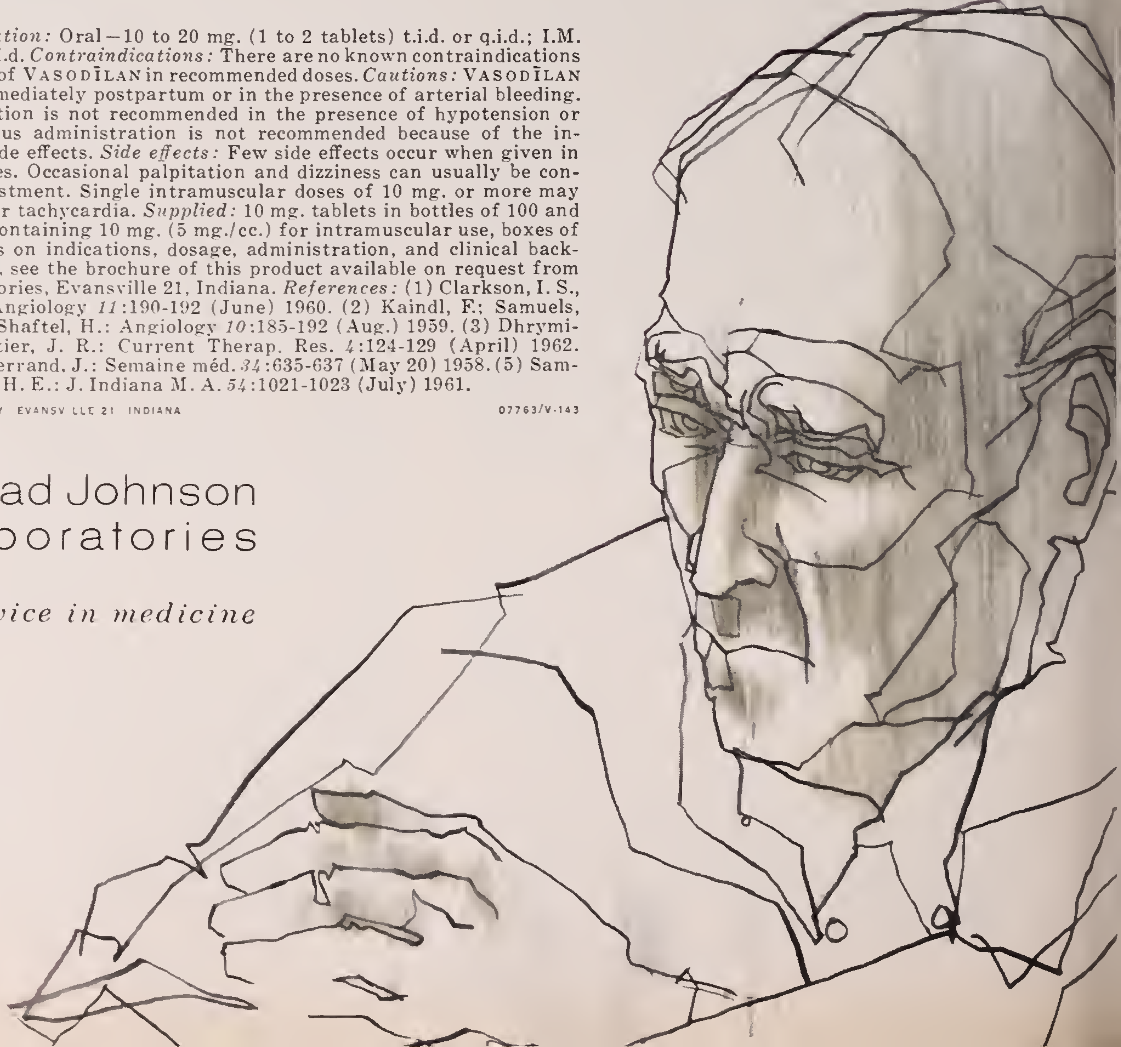
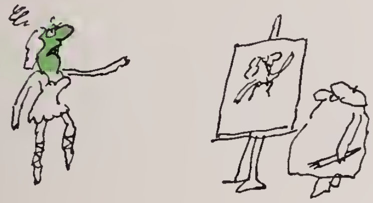


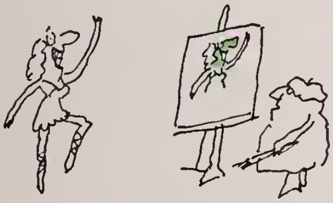
As Natasha posed for her portrait...



vertigo posed a problem.

The artist solved his with paint...

and a doctor solved hers with Antivert.



Antivert stopped the vertigo;
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*Scal, J. C.: Eye Ear Nose & Throat Month. 38:738 (Sept.) 1959.

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continued from page 203

d. A bill requiring the installation of safety seat belts in the front seats and safety seat belt attachments in the rear seats of all 1964 model automobiles and requiring further that any seat belt or safety harness so installed shall meet the standards of the Society of Automotive Engineers. The bill would apply to all motor vehicles which are bought, sold, leased, traded or transferred from or to Oregon residents at retail.

e. A bill providing that the State Health Officer or his representative shall inspect homes for the aged and infirm at least once each year instead of four times each year as the law now requires.

f. A bill amending the Day Nurseries Act which would change the definition of a "day nursery" as being an institution or establishment offering custodial care for children under six years of age. (The present definition in the Act specifies fourteen years of age.)

g. An amendment to the Restaurant Sanitation Law giving the State Board of Health authority to promulgate and enforce rules and regulations relating to the dispensing of food and beverages through vending machines and mobile units, and the "commissaries" which service them.

h. A bill relating to municipal plumbing regulations providing that a county may enact and enforce ordinances relating to plumbing and cesspool installations.

i. A bill providing that privately owned camping vehicle parks shall be required to provide the same sanitary facilities now required of tourist parks, trailer parks and similar facilities.

j. A bill amending the Furniture and Bedding Act strengthening the provision prohibiting the sale of upholstered furniture or article of bedding which is unclean, filthy, soiled, offensive or otherwise hazardous or which has been manufactured, repaired or renovated with materials of like unsafe qualities and prohibiting the sale of materials of such quality. The Furniture and Bedding Act is further amended to increase the annual registration fees of businesses engaged in the manufacture, sale, renovation and sterilization of furniture and bedding and also of supply dealers, supply depots and auctioneers.

6. That the Society not take action on a bill being sponsored by the Oregon State Board of Health relating to plumbers which **removes** from the Oregon Plumbers Act a provision that any person may repair or install plumbing in communities of 250 or less population.

7. That the Society support the request of the Superintendent of the Oregon Fairview Home to the 1963 Oregon State Legislature for funds to construct an intensive treatment unit to house its deformities control program.

8. That, in an emergency, the Committee be authorized to act in accordance with current Society policy and, in absence of such policy, to confer with the Executive Committee of the Board of Trustees.

Professional corporations or associations

Upon recommendation of the Executive Committee, the Board of Trustees voted that the Society sponsor state legislation permitting the establishment of professional corporations or associations. This legislative proposal was laid on the table by the House of Delegates at its 1962 Annual Meeting, pending the action of Congress on H.R. 10. Inasmuch as this federal legislation did not appear to offer the advantages to physicians and persons in other professions, great interest was stimulated among the Society membership to consider permitting the establishment of professional corporations or associations in Oregon. This interest culminated in a strong presentation before both the Executive Committee and the Board on February 2nd.

Aid to local health departments

Edgar M. Rector, Chairman, presented to the Board of Trustees a recommendation of the Committee on Public Health that the Society reaffirm its support of State financial aid to local health departments and endorse a bill for this purpose being sponsored by the Oregon Public Health Association. This proposed legislation would appropriate approximately $900,000 annually to be used in support of local public health activities. It includes a "bonus" allowance for those counties which combine to form a district health department.

The Board of Trustees voted to refer these recommendations to the Committee on Public Policy.

Employment of the handicapped

The question of the Society's support of programs designed to encourage the employment of the handicapped was brought to the attention of the Board by the Committee on State Industrial Affairs. The Committee recommended that the Society declare itself as favoring legislation for modifying the Workmen's Compensation Act to encourage such employment. In this connection, the Committee expressed the opinion that legislation might be introduced at the 1963 Legislative Session amending the administration of the "2nd Injury Reserve Fund" in the Workmen's Compensation Act which would give greater relief to the employer when a handicapped employee was injured.

Welfare medical aid program

The following recommendations presented by Stanley A. Boyd, Chairman of the Committee on Charitable Medical Care, were adopted by the Board:

> Relative to the medical aid program of the State Public Welfare Commission and the resolution introduced at the January 5, 1963 meeting of the Board of Trustees by James H. Seacat:
>
> 1. That the practice of prorating reimbursements to physicians for services rendered to public assistance recipients should not be continued.
>
> 2. That physicians should be paid in full for services rendered to public welfare recipients just as any other purveyor of services and that an adequate schedule for reimbursing physicians should be adopted.
>
> 3. That physicians in Oregon reaffirm the traditional principle that they will continue to care for patients eligible for public welfare benefits when sufficient welfare funds are

lacking but will **not** undertake the administrative functions required by the Welfare Commission.

4. That the State Public Welfare Commission should request adequate funds from the State Legislature to support its medical aid programs and that the Society assist the Commission in presenting such requests at legislative committee hearings.

5. That the Society appoint a committee to confer with the Subcommittee on Budget and Finance of the State Public Welfare Commission.

6. That the Society cooperate with the State Public Welfare Commission in developing methods for the proper utilization of physicians' services.

7. That Oregon Physicians' Service be instructed to offer its services and submit a "bid" to the State Public Welfare Commission for the administration of the "medical and surgical benefits" section being presented to the Oregon State Legislature as a part of the revised "Medical Assistance for the Aged" program in Oregon.

AMA policy on health of aged

Max H. Parrott, Delegate to the American Medical Association and a member of the Association's Council on Legislative Activities, reported to the Board the current policies of the American Medical Association related to health care of the aged which were adopted by the House of Delegates at the 1962 Clinical meeting in Los Angeles. Dr. Parrott recommended that this statement of policy be incorporated in the proceedings of the meeting and mailed to each member of the Society. These policies which were presented to the AMA House of Delegates by the Board of Trustees are:

1. Kerr-Mills Law

(a) Removal of the requirement that both Old Age Assistance (OAA) and Medical Assistance for the Aged (MAA) programs be administered by the same agency.

(b) Provide flexibility in the administration of the income limitations proposed under state law so that a person who experiences a major illness may qualify for benefits if the expense of that illness, in effect, reduces his money income below the maximum provided.

(c) Include a provision in the law requiring state administering agencies to seek expert advice from physicians or medical societies through medical advisory committees.

(d) Provide for "free choice" of hospital and doctor under state programs.

2. Internal Revenue Code

(a) Tax deductions for medical expenses of dependents over age 65.

(b) Removal of the 1 per cent drug limitation and the inclusion of drugs as medical expenses.

(c) To permit taxpayers over age 65 to receive full tax benefit for medical expenses by use of the carry-forward and carry-back principle.

(d) Provide a tax credit for medical expenses paid by the over age 65 taxpayer, proportionate to the relation of the taxpayer's medical expense to his taxable income.

Miscellaneous actions

Among other important actions at its February meeting the Board of Trustees:

1. Approved the application of H. R. Shields of Portland for life membership.

2. Voted that the Board of Medical Examiners be requested to take appropriate action against optometrists who may appear to be engaged in activities which are the practice of medicine.

3. Voted that the Board of Medical Examiners be requested to explore all areas in which there may be violations of the Medical Practice Act by others as well as all other circumstances under which such violations may appear to occur.

UOMS Alumni Annual Meeting and Sommer Lectures

Annual meeting of the University of Oregon Medical School Alumni Association combined with the Sommer Memorial Lectures will be held at the Medical School Auditorium, Portland, April 24-26. Sommer lecturers are Lord Russell Brain, Bart., F. R. C. P., London, England; C. A. Hallenback, M. D., Rochester, Minnesota; and Robert W. Wilkins, M. D., Boston, Massachusetts. Class reunions and annual dance will be at the Benson Hotel, Thursday evening, April 25.

PROGRAM

WEDNESDAY, APRIL 24

9:45 Headache *Lord Russell Brain, Bart., F.R.C.P.*, London
Sommer Memorial Lecture

10:35 Coffee Break

10:55 Changing Aspects of Hirschsprung's Disease *C. A. Hallenback, M.D.*, Rochester
Sommer Memorial Lecture

1:30 Pathogenesis of Essential Hypertension *Robert W. Wilkins, M.D.*, Boston
Sommer Memorial Lecture

2:20 Hysterosalpingography as Treatment for Infertility *Allan Palmer, M.D.* '34, San Francisco

3:00 Coffee Break

3:20 Newer Narcotic and Non-Narcotic Analgesic Drugs *Norman A. David, M.D.*, Portland

4:00 Pediatric Syndromes Associated with Oral-Facial Defects *Richard W. Olmstead, M.D.*, Portland

THURSDAY, APRIL 25

9:00 The Pathogenesis of Peptic Ulceration *C. A. Hallenback, M.D.*, Rochester
Sommer Memorial Lecture

9:50 The Physiology of Peripheral Arterial Circulation *Robert W. Wilkins, M.D.*, Boston
Sommer Memorial Lecture

10:40 Coffee Break

11:00 The Environment and the Skin *Raymond R. Suskind, M.D.*, Portland

11:40 Annual Business Meeting

1:30 Neurological Complication of Neoplasm
Lord Russell Brain, Bart., F.R.C.P., London
Sommer Memorial Lecture

2:20 The Ramifications of the Heritable Connective Tissue Disorders through the Various Disciplines of Medicine
Sture Johnson, M.D., '38, Madison

3:00 Coffee Break

3:20 The Challenge of the Massive Burn
Clare Peterson, M.D., '43, Portland

4:00 Tour of Research Building

EVENING

Class Reunions, Annual Dinner Dance, Benson Hotel

FRIDAY, APRIL 26

9:00 The Physiology of Venous Circulation
Robert W. Wilkins, M.D., Boston
Sommer Memorial Lecture

9:50 Role of Active Transport in Cell Function
John T. Van Bruggen, Ph.D., Portland

10:20 Coffee Break

10:40 Prevention of Thrombo Embolic Disease
Arthur Seaman, M.D., Portland

11:10 Neurology of the Cervical Spine
Lord Russell Brain, Bart, F.R.C.P., London
Sommer Memorial Lecture

1:30 Islet-cell Tumors of the Pancreas
C. A. Hallenback, M.D., Rochester
Sommer Memorial Lecture

2:20 Colons and Semi-colons
John A. Benson, Jr., M.D., Portland

3:00 Coffee Break

3:20 Symposium on Hypertension
Howard P. Lewis, M.D., '30, Portland, *Moderator*
Lord Russell Brain, Bart., F.R.C.P.
C. A. Hallenback, M.D.
Robert W. Wilkins, M.D.
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Oregon State Medical Society
1963

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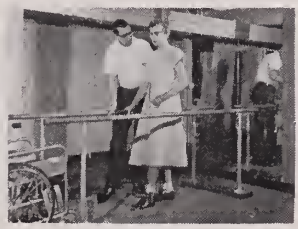

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North Pacific Society of Neurology and Psychiatry

A psychologist, James V. McConnell, Ph.D., has been invited as one of the guest speakers at meeting of North Pacific Society of Neurology and Psychiatry, at the Benjamin Franklin Hotel, Seattle, April 4-6. He is from the Planaria Research Group, Department of Psychology, University of Michigan. Also to give addresses at the meeting will be Stephen Fleck, Associate Professor, Department of Psychiatry, Yale University, and K.A.C. Elliott, Ph.D., of the Montreal Neurological Institute.

PROGRAM

THURSDAY, APRIL 4

Joint session

1:00 Cannibalism and chemicals: memory transfer agents in flat worms.—James V. McConnell, Ph.D.

Psychiatric session

2:00 Family Dynamics in Schizophrenia—S. Fleck, M.D.
2:30 Transactional Analysis—R. L. Goulding, M.D.
3:00 Parents whose Children have Repeatedly Ingested Poison—R. Sobel, M.D. and J. A. Margolis, M.D.
3:20 Responses to Head Pain and Suggestion of Head Pain—D. L. Dudley, B.S., T. H. Holmes, M.D., M. Masuda, Ph.D., C. J. Martin, M.D., and H. S. Ripley, M.D.
3:40 Analysis of a Post-hospital Therapy Group—M. Scher, M.D., and M. H. Johnson, M.D.
4:00 Peptic Ulcers in Children—T. P. Millar, M.D.
4:20 Maternity Syndrome: Review of the Literature
  Etiology and Treatment—J. W. Boudwin, M.D.
  Current Research Foci—V. L. Larsen, M.D.

Neurology-Neurosurgery Section

2:00 The Re-operated Back—W. Klemperer, M.D. and J. Stewart, M.D.
2:30 Twist Drill Diagnosis of Acute Epidural Hematoma—B. O. Rand, M.D.
3:30 Waking EEG Pattern in Unresponsive Decerebrate State Following Brainstem Infarct—G. I. Chatrian, M.D., L. E. White, M.D., and Cheng-Mei Shaw, M.D.
4:00 Palliative Treatment of Inoperable Intracranial Neoplasms with Steroids—G. A. Ojemann, M.D.
4:30 Unusual Incidence of Arhinencephaly—L. E. White, M.D., E. C. Alvord, M.D., C. M. Shaw, M.D., and R. N. Hayden, M.D.

FRIDAY, APRIL 5

Psychiatric Section

8:40 Psychology of Drivers in Traffic Accidents—S. E. Harris, M.D.
9:00 Diagnosis of Males with Klinefelter's Syndrome—H. C. Thuline, M.D.
9:20 Psychiatric Implications with Vasectomy—W. E. Puddy, M.D.

Neurology-Neurosurgery Section

9:00 Christmas Disease—M. Malden, M.D.

Joint Session

10:00 A Tape Recorder Theory of Learning—J. V. McConnell, Ph.D.
11:00 Biochemical Background of Convulsions, Coma, and Some Neurologic Disorders—K. A. C. Elliott, Ph.D.

SATURDAY, APRIL 6

Psychiatric Section

8:40 Selection and Training of Psychiatric Aides—R. L. Houk and N. F. Thomas, M.A.
9:00 Relationship between Loss of Love Objects and Suicide Reactions—T. L. Dorpat, M.D.
9:20 Advances in Psychoanalytic Therapy—G. Heilbrunn, M.D.

Neurology-Neurosurgery Section

9:00 Brain Scanning with Radioactive Mercury—G. LaZerte, M.D.
9:30 Selection of Surgery for Cervical Disc Disease—W. Kelly, M.D.

Joint Session

10:15 Genetic Factors Affecting Behavior in Neuropsychiatric Disease—A. Motulsky, M.D.
11:00 Modes of Action of Drugs that Affect Nervous Activity—K. A. C. Elliott, Ph.D.

Spokane Surgical Society

Annual meeting of the Spokane Surgical Society will be held at the Davenport Hotel, Spokane, Saturday, April 6. Guest speakers will be Egbert H. Fell, Professor of Surgery, University of Chicago School of Medicine; G. Leslie Willox, Clinical Professor of Surgery, University of Alberta Faculty of Medicine; James R. Cantrell, Professor of Surgery, University of Washington School of Medicine; and Matthew W. McKirdie, Clinical Associate Professor of Surgery, University of Oregon Medical School.

PROGRAM

7:30 Breakfast. Panel discussion, Intestinal obstruction.
Moderator, Carl P. Schlicke, M.D.
Participants, Egbert H. Fell, M.D., Matthew McKirdie, M.D., James R. Cantrell, M.D., Milton W. Durham, M.D.

9:50 Pedicle Flap for Recurrent, Combined inguinal-femoral Hernia.—Richard E. Orr, M.D.

10:10 Carotid Body Resection for Asthma.—Gilbert Schneider, M.D.

10:30 Acute Arterial Injuries.—Richard E. Ahlquist, Jr., M.D.

10:50 Panel discussion, Jaundice.
Moderator, Everett B. Coulter, M.D.
Participants, G. Leslie Willox, M.D., James R. Cantrell, M.D., Robert P. Parker, M.D.

12:00 Luncheon. Surgical Care of Acquired Heart Disease.—Egbert H. Fell, M.D.

1:45 Panel Discussion, Retrospectroscope—If I Had a Second Chance.
Moderator, Robert F. Welty, M.D.
Participants, G. Leslie Willox, M.D., Matthew McKirdie, M.D., and others.

3:00 Injuries to the Eye.—Charles I. Gates, M.D.

3:20 Anterior Spinal Fusion.—Robert P. Shanewise, M.D.

3:40 Experimental Studies on Surgical Masks.—Peter Grabicki, M.D.

4:00 Pelvic Masquerading Disease-Endometriosis. —W. Harvey Frazier, M.D.

4:20 Coronary Artery Abnormalities.—Egbert H. Fell, M.D.

7:30 Dinner. A Surgeon's Experience in Russia.—G. Leslie Willox, M.D.

Pediatric electrocardiography course at UW

A two day course in pediatric electrocardiography will be given in room NN 203, University Hospital, University of Washington School of Medicine, Seattle, April 24-25. Guest speaker will be Madison S. Spach, Division of Pediatric Cardiology, Duke University School of Medicine. Faculty members from the University of Washington will be W. G. Guntheroth, David Baum, W. E. Merritt, B. C. Morgan, and Allen Scher (Ph.D.).

The course will approach the conventional 12 lead electrocardiogram by vector analysis rather than by pattern memorization. Actual vector loops will be used to demonstrate the method, but emphasis will be on the conventional scalar leads in normal children and with heart diseases.

Southwest Washington AGP

The Southwest Washington Academy of General Practice held its regular quarterly dinner meeting on Tuesday evening, January 22nd at the Longview Country Club.

Following dinner and social hour those present listened to Edward Davis, neurosurgeon of Portland, discuss Head Injuries.

Attendance at the meeting was the largest in a number of years, as forty-four members and guests were present for the evening's meeting.

Two leave UW faculty

Recognition has been given two members of the faculty of the University of Washington School of Medicine, in appointments to responsible positions elsewhere.

Fred Plum, professor of neurology at UWSM since 1953, goes to Cornell University Medical College, New York, where he will assume the chair vacated by death of Harold G. Wolff. He will be the Anne Parish Titzell Professor of Neurology in Medicine, and Neurologist-in-Chief of the New York Hospital. Dr. Plum returns to his medical alma mater and to the hospital where he received much of his early training. He leaves Seattle at conclusion of the current school year.

Robert Aldrich, chairman of the Department of Pediatrics, has resigned this position but retains professorship on leave status to become director of a newly created expansion of the U. S. Public Health Service. He will head the National Institute of Child Health and Human Development, devoted to research in health status, needs and problems of people in various stages of development. Dr. Aldrich, who came to Seattle from the University of Oregon in 1956, assumed his new duties March 1.

Radiologist reports from Algeria

Richard Kegel, radiologist of Aberdeen, Washington, wrote from Algiers, "The work is fascinating. I am quite content with what we are doing even though it be a spoonful in a sea of misery."

Dr. Kegel was a member of a team of American physicians who flew to Algeria, January 28, for one month to operate clinics, attend patients, and teach medical students. Algiers, a city of 400,000, has been without physicians since Algerian independence was won in 1961. American physicians have been serving voluntary monthly stints there since July, 1962.

Of the hospital at which he served, Dr. Kegel wrote, "We're freezing cold . . . stone walls allow for little heat . . . we work in sweaters and overcoats. Puny radiators give off a little heat when sat on. Patients have no gowns or sheets, just a blanket and mattress cover."

Major health problems in Algeria are tuberculosis and pediatric conditions. Nine hundred of the 1300 beds in the Algerian hospital are for tuberculosis patients. Many of the children in the hospital, Dr. Kegel reports, were abandoned during the war.

Arrangements for the medical teams are made by MEDICO, a branch of CARE, and funds are provided by the U.S. State Department as part of the foreign aid program for Algeria. The physicians serve without compensation other than their travel fare and a modest expense allowance. Thousands of dollars worth of drugs and medical supplies for the work are contributed by American pharmaceutical firms.

Dr. Kegel returned to his duties at St. Joseph and Grays Harbor Community Hospitals in Aberdeen early in March.

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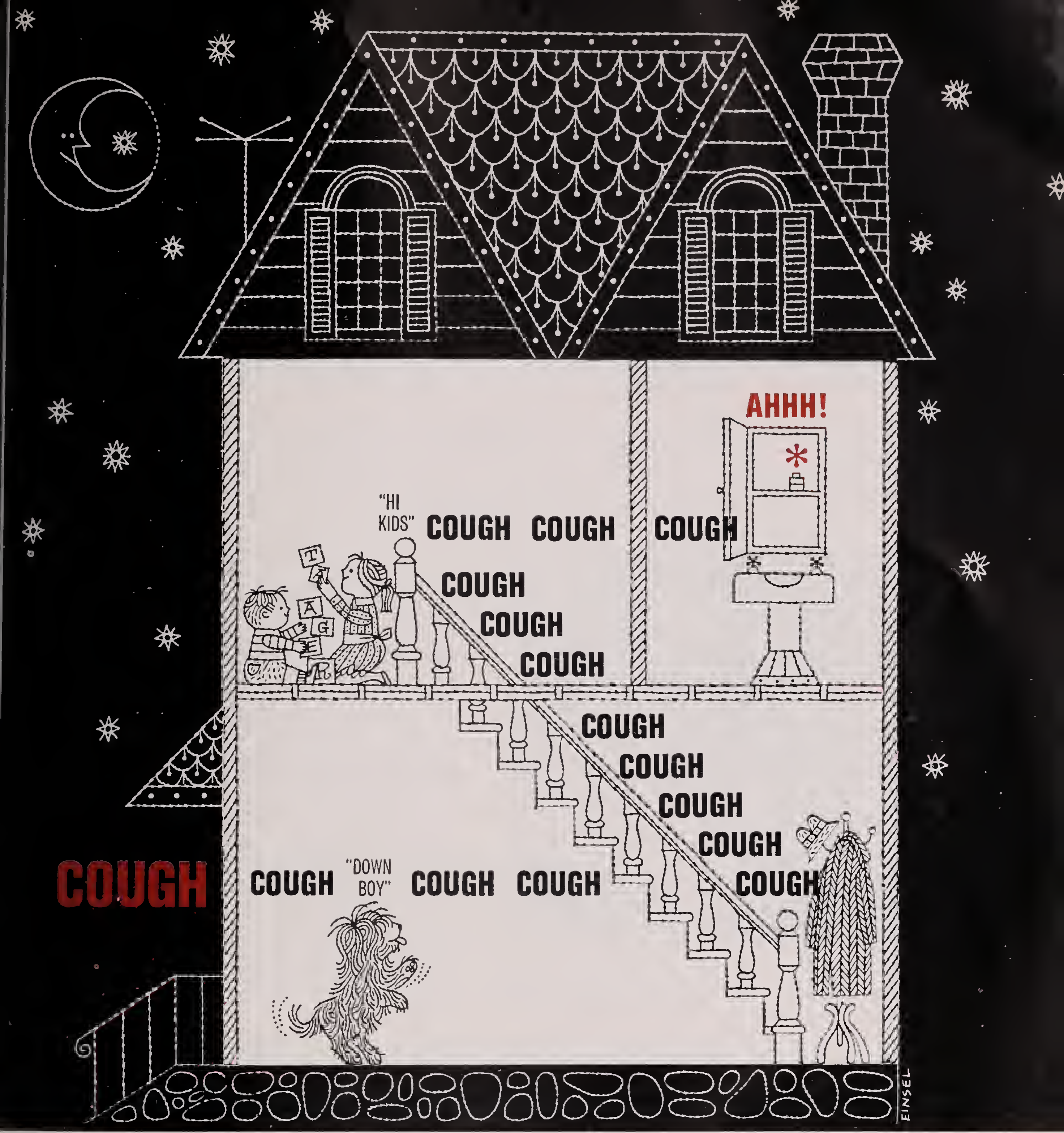

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Robins returns

C. A. Robins, Lewiston, is again conducting the Legislative Dispensary sponsored as a public relations project for members of the 37th Idaho Legislature by the Idaho State Medical Association.

For the third consecutive session, Dr. Robins, formerly of St. Maries, who served in the Idaho Legislature as Benewah County Senator from 1938 to 1944, and Governor of Idaho from 1946-52, has the interesting job of keeping 44 Senators, 63 members of the House of Representatives, and 100 attaches "on the job" in the Statehouse during the 60-day session.

Statistics revealed that so far Dr. Robins has had 140 office calls, treating 80 persons representing 40 of the state's 44 counties.

Officers and Councilors meet

The first meeting of the Association Officers and Councilors for this year was held in offices of the Association in Boise on February 1-2, with President Manley B. Shaw, Boise, presiding. Attending the session were President-Elect Paul B. Heuston, Twin Falls; Secretary-Treasurer A. Curtis Jones, Boise; Councilor Wallace H. Pierce, Lewiston; William B. Jewell, Emmett; James R. Kircher, Burley; Corwin E. Groom, Pocatello; A.M.A. Alternate Delegate Donald K. Worden, Lewiston. Unable to attend were Immediate Past-President Robert E. Staley, Kellogg, and A.M.A. Delegate Alexander Barclay, Coeur d'Alene.

Many important matters were considered during the two-day session, including a review of the proposed legislation; the membership survey; a report concerning Idahoans for Good Government; the scientific program for the 1963 annual meeting of the association; a progress report on the South Idaho Medical Service Bureau, Inc.; the Kerr-Mills program as being administered by the State Department of Public Assistance; a report from the Western Interstate Commission for Higher Education and biennium appropriation, and coming medical school survey of the four states of Montana, Wyoming, Nevada and Idaho through the WICHE program; the annual audit, and many other matters.

Three Idaho physicians have accepted appointments by the American Medical Association to im-

Meeting Dates

1963	71st Annual Meeting	June 26-29	Sun Valley
1964	72nd Annual Meeting	June 17-20	Sun Valley
1965	73rd Annual Meeting	June 23-26	Sun Valley
1966	74th Annual Meeting	July 6- 9	Sun Valley
1967	75th Annual Meeting	June 28-July 1	Sun Valley
1968	76th Annual Meeting	June 26-29	Sun Valley
1969	77th Annual Meeting	June 25-28	Sun Valley
1970	78th Annual Meeting	July 1- 4	Sun Valley

portant activities for the coming year. Receiving recognition are:

Alfred M. Popma, Boise, re-appointed as a member of the A.M.A. Committee on Voluntary Health Agencies.

Quentin W. Mack, Boise, re-appointed as a member of the A.M.A. Committee on Medical Rating of Physical Impairment.

Maurice M. Burkholder, Boise, appointed as a member of the A.M.A. Council on Mental Health.

Vascular disease symposium at Pocatello

The Pocatello Chapter of the American Academy of General Practice will conduct a Symposium on Peripheral-Vascular Disease at the Bannock Hotel, 8:00 a.m., Saturday, March 16. The program, arranged by Arch T. Wigle, Pocatello, acceptable for four hours of category one credit, will have the following as guest speakers:

D. E. Strandess, Jr., Seattle, Clinical Investigator, Veterans Administration Hospital.

Leon A. Phillips, Seattle, Radiologist-in-Chief, King County Hospital, Assistant Professor, Department of Radiology, University of Washington Medical School.

W. K. Fitzpatrick, Jr., Salt Lake City, Chief, Surgical Service, Veterans Administration Hospital.

Postgraduate meeting at McCall

The Southwestern Idaho District Medical Society and the local chapter of the Academy of General Practice will hold a two-day winter meeting at McCall, March 16-17, Samuel C. Taylor, Nampa, Program Chairman for the society, reports.

Speakers for the session will be William Silen, San Francisco, Assistant Professor of Surgery, University of California School of Medicine.

Eugene Eisenberg, San Francisco, Assistant Professor of Medicine, University of California School of Medicine.

Joseph Kushner, San Francisco, Assistant Clinical Professor of Pediatrics, University of California School of Medicine.

Scientific sessions: March 16—4:00 to 7:00 p.m.; March 17—8:30 to 11:30 a.m. (Skiing is excellent.) Six hours Category 1 credit to AAGP members.

State Board of Medicine Section

Samuel M. Poindexter, Boise, Chairman of the Idaho State Board of Medicine, and President of The Federation of State Medical Boards of the United States, presided at the 51st annual meeting of the organization in Chicago this week in connection with the Annual Congress on Medical Education. Dr. Poindexter was elected to this office last year.

Other members of the Board who attended the session include W. Wray Wilson, Coeur d'Alene, John E. Comstock of Pocatello, and Charles E. Kerrick, Caldwell.

This year marks the 20th anniversary of Dr. Poindexter in licensure work in Idaho.

The regular meeting of the State Board of Medicine for the purpose of conducting Board business and granting licensure, was held in Boise, Jan. 14, 15, 16, 1963. The session was attended by Chairman Poindexter, Vice-Chairman Fred T. Kolouch, Twin Falls; Dr. Wilson, Dr. Comstock and Dr. Kerrick.

Four physicians who had been granted Temporary Licenses received permanent licensure. They were:

Rae J. Johnston, Salt Lake City; Thomas William Higgs, Idaho Falls; Don F. Kimmerling, and William H. Bond, Lewiston.

Five physicians successfully passed the written examination of the State Board of Medicine and were granted Idaho licensure. They were:

Joseph A. Ferreira, Granada Hills, California, (Boise). Graduate May 1956, National Autonomous University of Mexico Medical School. Internship Good Samaritan Hospital, Los Angeles, 1956-58. (Certified by the Educational Council for Foreign Medical Graduates.)

Alden Lloyd Poulsen, Mountain Home Air Force Base, Idaho. Graduate University of Utah College of Medicine, June, 1961. Internship Brooks General Hospital, Fort Sam Houston, Texas, 1961-62.

Terry L. Hansen, Pocatello (U.S. Navy). Graduate Northwestern University Medical School, June, 1961. Internship University of Oregon Hospitals and Clinics, 1961-62.

Alfonso Torres-Vincenzi, Salem, Ore. Graduate of University of Kansas School of Medicine, Kansas City, June 1956. Internship Emanuel Hospital, Portland, Oregon, 1956-57.

James R. S. Paterson, Seattle, Wn., Graduate University of Edinburgh Faculty of Medicine, Edinburgh, Scotland, 1947. Internship Western General Hospital, Edinburgh, 1947-48. (Certified by the Educational Council of Foreign Medical Graduates.)

Fourteen physicians were granted licensure without written examination on the basis of endorsement by states maintaining standards comparable to Idaho or through endorsement by the National Board of Medical Examiners. They were:

Warren T. Sutton, Idaho Falls. Graduate Northwestern University Medical School 1955. Internship Evanston Memorial Hospital, Evanston, Ill., 1955-56. U.S. Navy.

Ralph J. Litton, Jr., Salt Lake City. Graduate George Washington University Medical School, Washington, D.C., 1958. Internship San Francisco General Hospital, 1958-59. Orthopedics Residency.

Donald D. Weaver, Coulee Dam, Wash. Graduate College of Medical Evangelists, 1960. Internship Deaconess Hospital, Spokane, 1960-61. General practice.

Everett N. Jones, Jr., Boise. Graduate Creighton

University College of Medicine, Omaha, 1957. Internship St. Joseph's Hospital, Denver, 1957-58. Surgery.

Philip Washburn, Blackfoot. Graduate University of Utah College of Medicine, 1959. Internship Santa Barbara Cottage Hospital, 1959-60. Psychiatry.

LeClaire L. Leslie, Arlington Heights, Ill., (Cottonwood). Graduate Baylor University College of Medicine, Houston, Texas, 1956. Internship Jefferson Davis Hospital, 1956-57. Pediatrics.

Leonard J. Rothfield, Arlington Heights, Ill., (Cottonwood). Graduate Stritch School of Medicine of Loyola University, Chicago, 1953. Internship St. Louis City Hospital, St. Louis, 1953-54. Surgery.

Lloyd George Veasy, Salt Lake City. Graduate University of Utah College of Medicine, Salt Lake City, 1946. Internship Chicago Wesley Memorial Hospital, Chicago, 1947-58. Pediatrics.

Bruce Adams Ward, Denver. Graduate Northwestern University Medical School, 1958. Internship St. Vincent Hospital, Portland, Ore., 1958-59. Radiology.

Gordon Bartlett Wheeler, Chester, Conn. Graduate Boston University School of Medicine, 1945. Internship U.S. Public Health Hospital, Boston, 1945-46. Industrial Medicine.

Gerald M. Hecker, Portland, Ore. (Boise). Graduate University of Oregon Medical School, 1958. Intership University of Oregon Hospitals and Clinic, 1958-59. Urology.

John M. Ocker, Jr., Portland, Ore., (Boise). Graduate Duke University School of Medicine, Durham, N.C., 1955. Internship Duke University Center, Durham, 1955-56. Urology.

Geneva Metzler Matlock, Salt Lake City, (Idaho Falls). Graduate University of Louisville School of Medicine, 1960. Internship Community Hospital, Battle Creek, Mich., 1960-61. Anesthesiology.

Melvin Lavern Matlock, Salt Lake City (Idaho Falls). Graduate University of Louisville School of Medicine, 1960. Internship Community Hospital, Battle Creek, Mich., 1960-61.

OBITUARY

HARLO B. RIGBY, *70, Rexburg, died January 28. Born in Rexburg, January 1, 1893, Dr. Rigby graduated from Harvard Medical School on June 18, 1920, after completing his first two years of medical training at the University of Utah.*

Dr. Rigby practiced medicine in Rexburg for nearly half a century. He held many positions in organized medicine having served as a member of the Idaho State Medical Examining Board from 1943 to 1949, and was President of the Upper Snake River Valley Medical Society in 1950 and 1957. He operated a private hospital at Rexburg before the Madison Memorial Hospital was built.

Dr. Rigby was a well known Hereford cattle raiser and breeder. At the time of his death, he and Mrs. Rigby were enroute to Las Vegas to a meeting of the National Cattlemen's Association.

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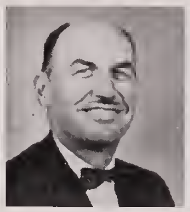
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References: (1) Ernst, E. M.: Current Therap. Res. 3:167, 1961. (2) Starling, R. J.: J.M.A. Georgia 50:442, 1961. (3) Sprogis, G. R.: Current Therap. Res. 3:393, 1961. (4) Coffee, H. L.: Clin. Med. 69:1561, 1962. (5) Mattey, W. E.: Indust. Med. 31:33, 1962.

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Sec., C. P. McKim, Baker
First Monday—7 p.m.—St. Elizabeth Hospital, Baker

Benton
Pres., L. J. Krakauer, Corvallis
First Monday — 6:30 p.m. — Country Club, Corvallis

Central Oregon
Pres., R. G. Stack, Redmond
Sec., L. G. Pulley, Redmond
First Monday — 7:30 p.m. — Pine Tavern, Bend

Clackamas
Pres., E. N. McLean, Oregon City
Sec., R. A. Payne, Milwaukie
Third Tuesday — 6:30 p.m. — Seid's Restaurant, Oregon City

Clatsop
Pres., A. J. Kerbel, Astoria
Sec., R. J. Kettlekamp, Astoria
Fourth Monday — 7:30 p.m. — St. Mary's Hospital, Astoria

Columbia
Pres., J. B. Steward, St. Helens
Sec., L. L. Ackerson, St. Helens
First Tuesday — 9:00 a.m. — Columbia District Hospital, St. Helens

Douglas
Pres., J. A. Colbrunn, Roseburg
Sec., C. H. Babbitt, Roseburg
Second Tuesday — 6:30 p.m. — Roseburg Country Club

Jackson
Pres., J. S. Ingram, Medford
Sec., R. H. Saul, Medford
Second Wednesday — 7 p.m. — Rogue Valley Country Club

Josephine
Pres., G. W. Tank, Grants Pass
Sec., D. R. McCarthy, Grants Pass
Time and location by announcement

Klamath
Pres., G. R. Nicholson, Klamath Falls
Sec., Miriam Luten, Klamath Falls
Second Tuesday — 7 p.m. — Klamath Falls

Lake
Pres., W. J. Strieby, Lakeview
Sec., J. Robertson, Lakeview
Second Tuesday each month

Lane
Pres., D. M. Brinton, Eugene
Sec., S. G. Oberg, Cottage Grove
First Tuesday — 6:30 p.m. — Eugene Hotel

Lincoln
Pres., E. A. Yeck, Newport
Sec., K. M. Rottluff, Newport
No regular date

Linn
Pres., A. G. Denker, Lebanon
Sec., C. W. Schoen, Lebanon
Second Monday — 6:30 p.m. — location announced

Malheur
Pres., A. M. Tanaka, Ontario
Sec., W. Hall, Ontario
No regular schedule

Marion-Polk
Pres., S. M. Lancefield, Salem
Sec., O. F. Kraushaar, Salem
Third Tuesday — 6:30 p.m. — Illahee Country Club, Salem

Mid-Columbia
Pres., J. A. Henderson, Hood River
Sec., L. L. Hoffman, Hood River
Second Tuesday — 6:30 p.m. — Alternate between Hood River and The Dalles

Multnomah
Pres., N. A. David, Portland
Sec., Willis J. Irvine, Portland
First Tuesday (Oct., Nov., Dec., March, May) — 6:00 p.m. — Location announced

Southwestern Oregon
Pres., A. H. Stage, Coos Bay
Sec., J. D. Hauschildt, Myrtle Point
Third Wednesday (Sept.-June) — 8 p.m. — Courtel, Coos Bay

Tillamook
Pres., Howard Kaliher, Tillamook
Sec., E. V. Young, Tillamook
Second Friday — 7 p.m. — Victory House, Tillamook

Umatilla
Pres., J. W. Grondalh, Pendleton
Sec., B. Duarte, Pendleton
Third Tuesday—7:30 p.m. — Pendleton Country Club

Union
Pres., J. E. Indihar, LaGrande
Sec., J. R. Sloop, LaGrande
On call of president

Washington
Pres., F. E. Bump, Forest Grove
Sec., A. O. Pitman, Jr., Hillsboro
First Monday — 8 p.m. — location announced

Yamhill
Pres., L. L. Silvers, Newberg
Sec., L. B. Hanson, McMinnville
First Tuesday — 7 p.m. — Oriental Garden, McMinnville

WASHINGTON

Benton-Franklin
Pres., R. S. Coler, Kennewick
Sec., R. T. DeMeritt, Richland
Third Tuesday — 6:30 p.m. — Black Angus Hotel, Kennewick

Chelan
Pres., G. R. Kingston, Wenatchee
Sec.-Treas., W. B. Zook, Wenatchee
First Monday — 6:30 p.m. — Wenatchee Golf and Country Club

Clallam
Pres., L. A. Schueler, Jr., Port Angeles
Sec., R. M. Allman, Port Angeles
Third Monday — 8 p.m. — Generally Olympic Memorial Hospital, Port Angeles

Clark
Pres., J. H. Gill, Vancouver
Sec., W. W. Holmes, Vancouver
First Tuesday — 6:30 p.m. — Royal Oaks Country Club, Vancouver

Cowlitz
Pres., S. R. Norquist, Longview
Sec., C. E. Buck, Longview
Third Tuesday — 7:30 p.m. — Bart's Charcoal Broiler, Longview

Grant
Pres., John Cooksey, Moses Lake
Sec., John Trantow, Quincy
Second Monday — 7:30 p.m. — Moses Lake or Ephrata

Grays Harbor
Pres., H. I. Weiner, Aberdeen
Sec., H. W. Bryant, Hoquiam
Third Wednesday — 6:30 p.m. — Grays Harbor Country Club

Jefferson
Pres. H. G. Plut, Port Townsend
Sec., B. N. Brydges, Port Townsend
Second week — Rotate between members' homes

King
Pres., W. O. Mills, Seattle
Sec., W. J. McDougall, Seattle
First Monday (Feb., May, Oct., Dec.)

Kitsap
Pres., R. P. Schutt, Bremerton
Sec., T. W. Schubert, Bremerton
Second Monday — 6:30 p.m. — Hearthstone, Bremerton

Kittitas
Pres., Rudolph Vernie, Ellensburg
Sec., R. H. Welding, Ellensburg
First Tuesday — 7:30 p.m. — Elks Club, Ellensburg

Klickitat-Skamania
Pres., H. W. Holderby, Goldendale
No regular meetings — annually — alternating between Goldendale, White Salmon and Stevenson

Lewis
Pres., B. A. Bede, Morton
Sec., W. J. Dugaw, Toledo
Second Manday — 8 p.m. — local hospital in Chehalis or Centralia, alternately

Lincoln
Pres., K. E. Gudgel, Odessa
Sec., J. Q. Sewall, Harrington
Three times annually

Okanogan
Pres., W. J. Henry, Twisp
Sec., L. J. Cowan, Omak
On call at Okanogan

Pacific
Pres., D. C. MacDonald, Raymond
Sec., J. C. Proffitt, South Bend
Second Wednesday — 6:30 p.m. — Bridges Inn, Raymond

Pierce
Pres., S. W. Tuell, Tacoma
Sec., A. J. Herrmann, Tacoma
Second Tuesday — 8:15 p.m. — Medical Arts Bldg. Auditorium, Tacoma

Skagit
Pres., M. L. Jahnson, Mt. Vernon
Sec., R. E. Carney, Mt. Vernon
Fourth Manday — 7 p.m. — Dale's Restaurant, Mt. Vernon

Snohomish
Pres., D. A. Lagozzino, Everett
Sec., R. G. Wyrens, Everett
First Tuesday — 7:30 p.m. — Everett Golf and Country Club

Spokane
Pres., F. M. Lyle, Spokane
Sec., R. J. Albi, Spokane
Fourth Tuesday — time and place announced, Spokane

Stevens
Pres., E. F. Darling, Colville
Sec., M. B. Snyder, Chewelah
First Tuesday — 8 p.m. — Chewelah and Colville Hospitals alternately

Thurston-Mason
Pres., J. S. Pritchard, Olympia
Sec., K. L. Partlow, Olympia
Fourth Tuesday — Olympia Country and Golf Club

Walla Walla Valley
Pres., R. C. Stotler, Walla Walla
Sec., R. C. Beck, Walla Walla
Second Thursday — 6:30 p.m. — Walla Walla Country Club

Whatcom
Pres., W. C. Flint, Ferndale
Sec., J. S. Mason, Bellingham
First Monday (except June, July, Aug.) — 6:30 p.m. — Leopold Hotel, Bellingham

Whitman
Pres., G. D. Barth, Garfield
Sec., R. M. Buttermore, Pullman
Third Tuesday each month

Yakima
Pres., R. R. Sackmann, Yakima
Sec., R. F. Crose, Yakima
Second Tuesday — 6:30 p.m. — Yakima Country Club

IDAHO

Ada
Pres., M. M. Burkholder, Boise
Sec., Q. L. Quickstad, Boise
Third Tuesday — each month

Bear River Valley
Pres., E. F. Landers, Montpelier
Sec., Glenn Schoper, Montpelier
First Friday — 7:30 p.m. — alternately between Preston, Soda Springs and Montpelier

Bonner-Boundary
Pres., F. H. Siemsen, Sandpoint
Sec., C. J. Edwards, Bonners Ferry
Irregular

Idaho Falls
Pres., R. H. Anderson, Idaho Falls
Sec-Treas., W. Petty, Shelley
Second Tuesday—every other month—6 p.m.—Bonneville Hotel

Kootenai-Benewah
Pres., E. R. W. Fox, Coeur d'Alene
Sec., D. A. Daugharty, Coeur d'Alene
First Tuesday—7:00 p.m.

North Idaho
Pres., O. M. Mackey, Lewiston
Sec., R. C. Colburn, Lewiston
Third Wednesday—each month

Shoshone
Pres., E. J. Fitzgerald, Wallace
Sec., G. M. Whitesel, Kellogg
January 11 and May 16

South Central
Pres., M. E. Scheel, Wendell
Sec., R. G. Neher, Shoshone
Second Tuesday—First month of each quarter—7:30 p.m.—place varies

Southeastern Idaho District
Pres., D. L. Wight, Pocatello
Sec., A. T. Wigle, Pocatello
Thursday (announced) — 7:00 p.m.—Bannock Hotel, Pocatello

Southwestern Idaho District
Pres., J. F. Stecher, Caldwell
Sec., H. C. Wesche, Nampa
Announced

Upper Snake River
Pres., E. L. Soule, St. Anthony
Sec., L. J. Petersen, Rexburg
First Monday—Dinner meeting—7:30 p.m.—Silver Horseshoe, St. Anthony

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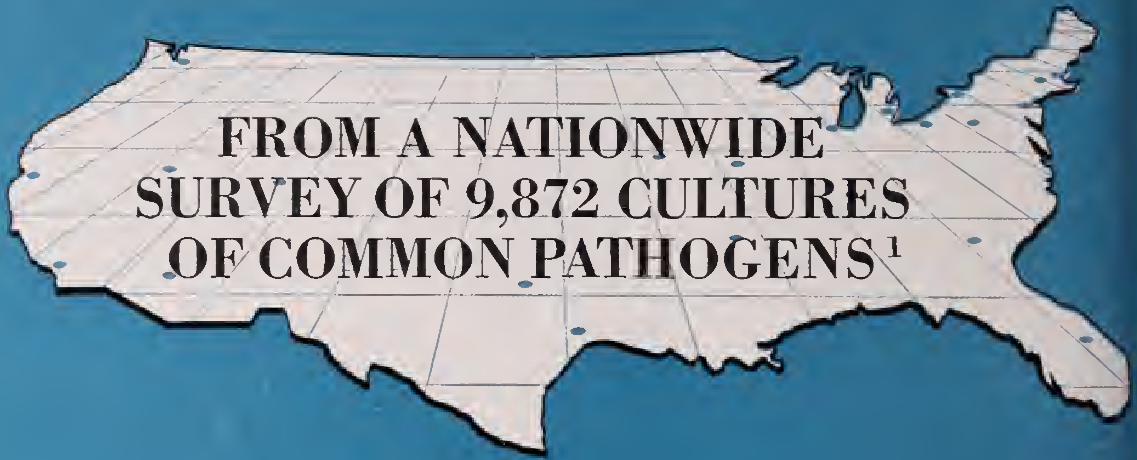

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Conclusions of Nationwide Survey: *Report I*

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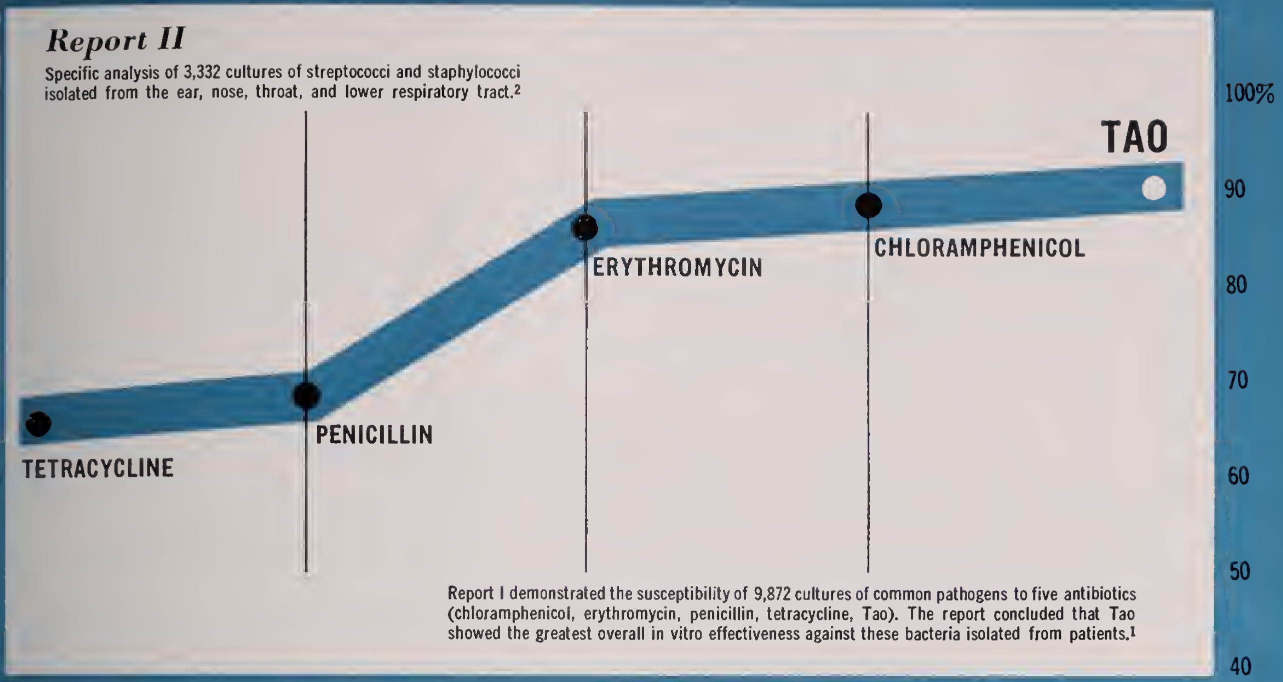
2. **Overall results showed a higher percentage of susceptibility** among these common pathogens to Tao than to the other antibiotics. Susceptibility to Tao was greatest, not only in respiratory streptococci and staphylococci, but also in these organisms isolated from skin and soft tissue (3,423 cultures), genitourinary and gastrointestinal tracts and other sources (2,458 cultures). Susceptibility was equal to all antibiotics tested in pneumococci from unspecified sources (463 cultures), and less to Tao in H. influenzae from unspecified source (196 cultures).

3. **Tao has been used for five years withou development of predictable cross resistanc** In 1958 and 1961, approximately 73% and 70% respectively, of erythromycin-resistant problem staphylococci showed susceptibility to Tao.[3,4] Th present study confirms the continuing high degre of Tao activity even against these pathogens. O 1,592 cultures of erythromycin-resistant staphy lococci, 68% were susceptible to Tao, while in th reverse situation, only 33% of 768 Tao-resistant staphylococci were susceptible to erythromycin.



Report II

Specific analysis of 3,332 cultures of streptococci and staphylococci isolated from the ear, nose, throat, and lower respiratory tract.[2]

Report I demonstrated the susceptibility of 9,872 cultures of common pathogens to five antibiotics (chloramphenicol, erythromycin, penicillin, tetracycline, Tao). The report concluded that Tao showed the greatest overall in vitro effectiveness against these bacteria isolated from patients.[1]

Report II

Results of Bacterial Susceptibility in ,332 Respiratory Pathogens

ferences

Bacterial Susceptibility Patterns: A Geographic Sur-' Fowler, J. Ralph, M.D., and Watters, John L., . Scientific Exhibit presented at the Annual Meet- of the American Society of Clinical Pathologists, cago, Ill., August 31 to September 9, 1962. owler, J. Ralph, Watters, John L. and Levy, Arthur Bacterial Susceptibility Patterns as Related to Geohic Variation and Anatomical Source. In press. nglish, A. R., and Fink, F. C.: Antibiot. & Chemo- 8:420 (Aug.) 1958. 4. English, A. R., and Fink, C.: Antibiot. and Chemother. 11:648 (Oct.) 1961.

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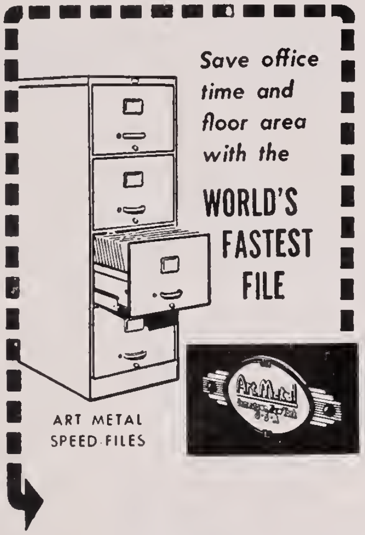

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Meetings OF MEDICAL SOCIETIES

AMA Annual—Atlantic City, June 16-20, 1963; San Francisco, June, 21-25, 1964, New York, June 20-24, 1965.

AMA Clinical—Portland, Dec. 1-4, 1963; Miami Beach, Nov. 29-Dec. 2, 1964.

Oregon State Medical Society—Sept. 25-28, 1963, Portland.

Washington State Medical Association—Sept. 15-18, 1963, Seattle.

Idaho State Medical Association—June 26-29, 1963, Sun Valley.

North Pacific Society of Neurology and Psychiatry—April 4-6, 1963, Seattle
Pres., Robert M. Rankin, Seattle
Sec., Thomas H. Holmes, Seattle

Northwest Soc. for Clin. Research—Jan. 10-11, 1964, Vancouver, B. C.
Pres., Denys K. Ford, Vancouver
Sec., R. E. Beck, Vancouver

Pacific Northwest Obstetrical and Gynecological Association — June 3-5, 1963, Victoria, B.C.
Pres., R. R. de Alvarez, Seattle
Sec., J. McDonagh, Vancouver, B.C.

Biennial Western Conference on Anesthes.—Mar. 25-28, 1963, Honolulu.
Chrmn., John Dillon, Los Angeles
Sec., C. M. Ballinger, Salt Lake City

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Ore. Acad. Ophth. & Otolar.—Portland Aero Club, 4th Tue., Sept.-May.
Pres., M. Harvey Johnson, Portland
Sect., D. W. McDaniel, The Dalles

Oregon Dermatologic Society—Portland 2nd Wednesday (Nov., Jan.-Apr.)
Pres., Sheldon Walker, Portland
Sec., F. A. J. Kingery, Portland

Oregon Pathologists Association—Portland, 2nd Wednesday (Feb., Apr., Oct., Dec.)
Pres., F. L. Vrtiska, Corvallis
Sec., A. A. Oyama, Portland

Oregon Radiological Society—University Club, Portland, 2nd Wednesday through school year
Pres., L A. Gay, The Dalles
Sec., G. R. Satterwhite, Portland

Ore. Soc. Obst. & Gynec.—Portland, Park Heathman, 3rd Fri. (Oct., Nov., Jan., May)
Pres., W. L. Hartmann, Portland
Sec., T. A. Treanor, Portland

Oregon State Society of Anesthesiologists—Portland, 3rd Friday (except June, July, Aug.)
Pres., J. A. Siebs, Eugene
Sec., P. E. Schaff, Portland

Oregon Urological Society—Quarterly Meetings, University Club, Portland
Pres., T. A. Davis, Portland
Sec., G. W. Schwiebinger, Portland

Portland Academy of Hypnosis — 3rd Monday (Sept.-May) Aero Club
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Portland Academy of Pediatrics—1st Monday
Pres., W. M. Clark, Jr.
Sec., J. W. Bussman

Portland Surgical Society—last Tuesday (Sept.-May), UOMS Library
Pres., J. M. Guiss
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WASHINGTON

Puget Sd. Acad. Ophth. & Oto.—3rd Tues. (Oct.-May) Seattle or Tacoma. Annual—Seattle, Jan. 17, 18, 1964.
Pres., H. L. Maier, Tacoma
Sec., D. F. Milam, Jr., Bellevue

Seattle Academy of Surgery—3rd Wed. bi-monthly; Seattle Yacht Club.
Pres., E. B. Parmelee
Sec., W. S. Brown

Seattle Gyn. Soc.—3rd Wed. exc. June, Aug., Dec., Feb.
Pres., D. M. McIntyre, Seattle
Sect., E. T. MacCamy, Seattle

Seattle Pediatric Society—3rd Friday (Sept.-May), College Club
Pres., R. F. L. Polley, Seattle
Sec., G. Pyne, Seattle

Seattle Surg. So.—4th Mon. (Sep.-June) Annual—Seattle, Jan. 24-25, 1964.
Pres., Eric Sanderson, Seattle
Sec., R. C. Coe, Seattle

Spokane Society of Internal Medicine—Quarterly, Rockwood Clinic
Pres., Robert Berghan
Sec., Richard E. Steury

Spokane Surgical Society—April 6, 1963, Davenport Hotel
Pres., F. M. Lyle
Sec., C. R. Cavanagh

Tacoma Academy of Internal Medicine —4th Tuesday (Sept.-May)
Pres., R. A. Kallsen
Sec., R. A. O'Connell

Tacoma Surgical Club—May 4, 1963, 3rd Tuesday (Sept.-May)
Pres., Dumont Staatz
Sec., Robert B. Burt

Washington Academy of Clinical Hypnosis—3rd Friday (Sept.-June)
Pres., Edward G. Goodrich, Ph.D., Seattle
Sec., John E. Nelson, Seattle

Washington Academy of General Practice—May 17-19, 1963, Wenatchee.
Pres., Louis Dewey, Omak
Sec., J. E. Gahringer, Jr., Wenatchee

Washington State Obstetrical Association—March 30, 1963, Seattle
Pres., R. K. Plant, Seattle
Sec., F. LeCocq, Yakima

Washington State Radiological Society —Seattle, 4th Mon., (Sept.-Apr.) Business Session, Meany Hotel, Scientific Sn. UWSM X-ray Dept.
Pres., W. A. Chesledon, Seattle
Sec., R. H. Rosenberg, Seattle

Washington State Society of Allergy—May, 1963, Portland
Pres., James W. Georges, Seattle
Sec., Paul P. Van Arsdel, Jr., Seattle

Wash. St. Soc. of Anesthesiologists
Pres., M. W. Bulmer, Wenatchee
Sec., Robt. M. Kintner, Wenatchee

Washington State Society of Internal Medicine—Sept. 18, 1963
Pres., D. M. Ulrich, Seattle
Sec., J. H. Lindberg, Seattle.

Yakima Obstetrical and Gynecological Society—Last Monday (except July, Aug., Dec.)
Sec., A. W. Bostrom, Jr.

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*Maxwell, M.H., *et al.*: JAMA *170*:917 (June 20) 1959.

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References: (1) Thacher, H. C., & Fishman, L.: *J. Maine M. A.* **52**:84, 1961. (2) Hopkins, E. W.: *Postgrad. Med.* **29**:451, 1961. (3) Hall, W. H.: *M. Clin. North America* **43**:191, 1959. (4) Krugman, S.: *Pediat. Clin. North America* **8**:1199, 1961. (5) Ede, S.; Davis, G. M., & Holmes, F. H.: *J.A.M.A.* **170**:638, 1959. (6) Wolfsohn, A. W.: *Connecticut Med.* **22**:769, 1958. (7) Calvy, G. L.: *New England J. Med.* **259**:532, 1958. (8) Hendren, W. H., III, & Haggerty, R. J.: *J.A.M.A.* **168**:6, 1958. (9) Cutts, M.: *Rhode Island M. J.* **43**:388, 1960. (10) Berman, W. E., & Holtzman, A. E.: *California Med.* **92**:339, 1960. (11) Vetto, R. R.: *J.A.M.A.* **173**:990, 1960. (12) Sia, C. C. J., & Brainard, S. C.: *Hawaii M. J.* **17**:339, 1958. (13) Rosenthal, I. M.: *GP* **17**:77 (March) 1958. (14) Gaisford, W.: *Brit. M. J.* **1**:230, 1959.

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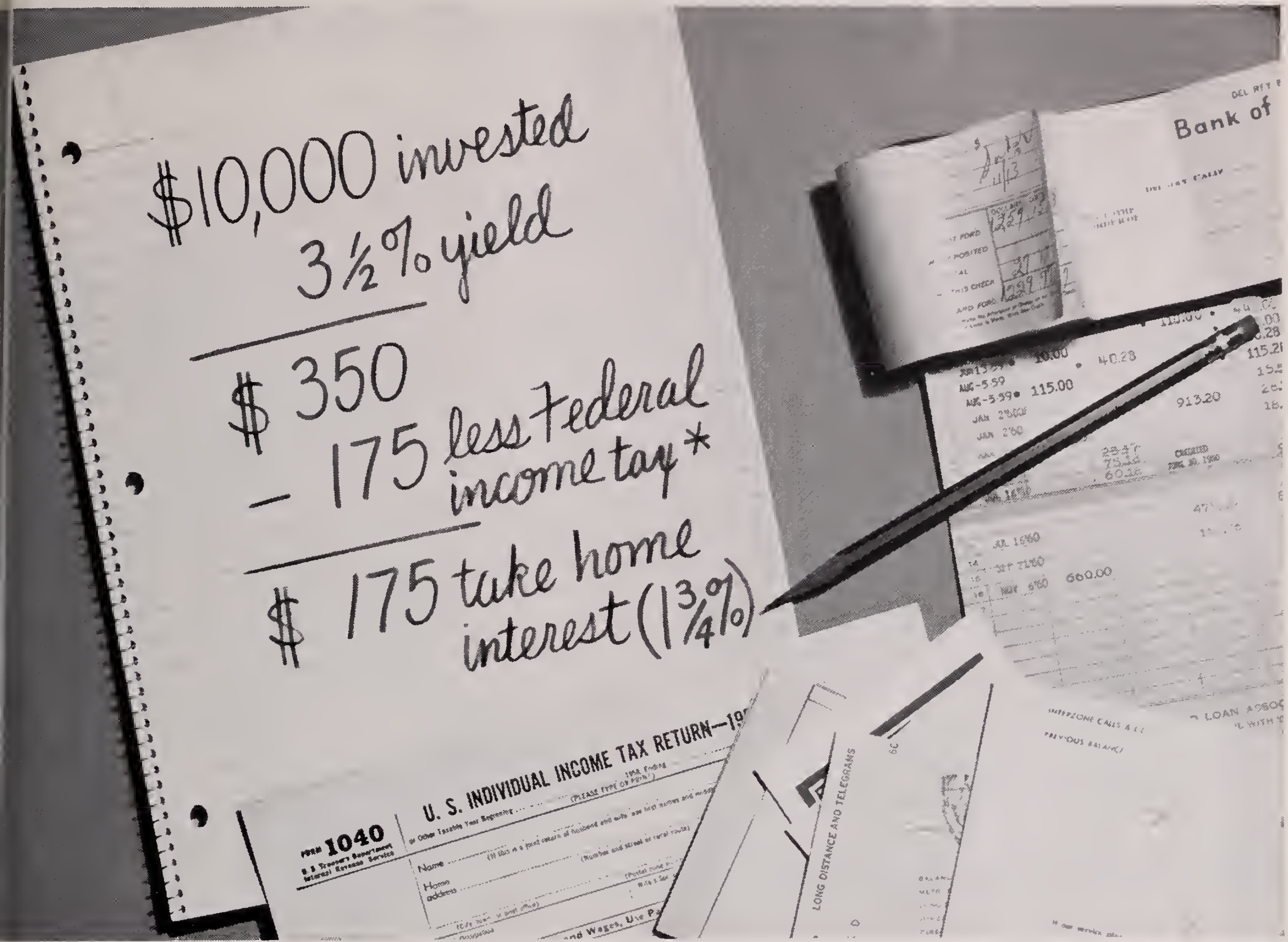
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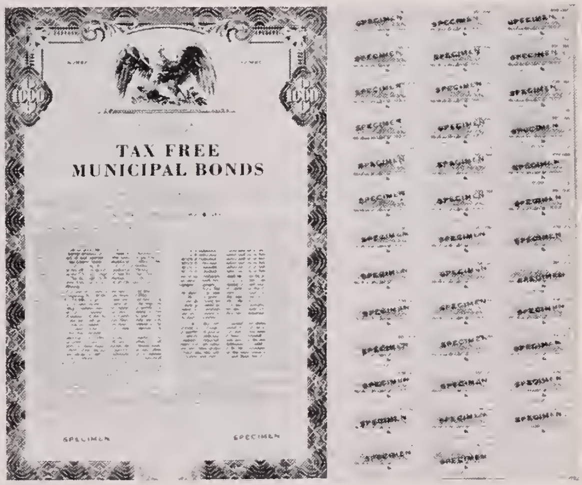

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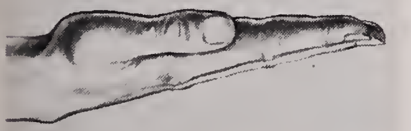

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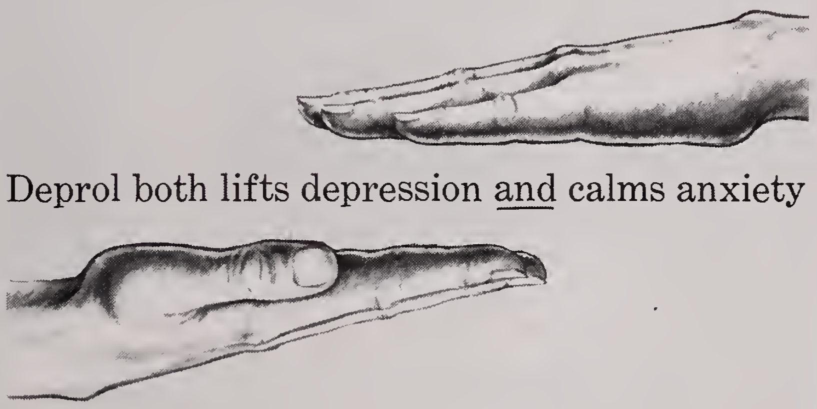

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Time for a change

EDITOR, NORTHWEST MEDICINE:

For more than 50 years the institution caring for the majority of hospitalized children in the Northwest has been called the Children's Orthopedic Hospital. Originating as a 6 bed ward in Seattle General Hospital in 1908, it soon outgrew its limitations and moved to expanded quarters on Queen Anne Hill. It was felt to be appropriately named at the time because the need for hospitalization for children was largely the result of osteomyelitis, poliomyelitis, tuberculosis and other chronic diseases involving the neuromuscular and skeletal systems—Orthopedic problems.

The original volunteer staff was composed of general practitioners, surgeons, and orthopedists; physicians equipped to treat the chronic, disabling conditions of that era. There were few, if any, pediatricians; and few acute pediatric diseases—the children with pneumonia, meningitis and septicemia lived or died irrespective of treatment at that time. Orthopedic problems comprised a large portion of children who lived long enough to undergo treatment.

But times have changed. Prontosil and sulfanilimide were discovered in the late 1930s, penicillin in the '40s, and a host of "wonder drugs" in the '50s. These drugs have made osteomyelitis an acute, mild disease, often treatable at home; they have made tuberculosis of the bone an oddity in children; vaccine has virtually wiped out paralytic poliomyelitis.

The Children's Orthopedic Hospital has changed with the times. The patient load is now less than 15 per cent orthopedics. The hospital now is full of treatable meningitis, acute respiratory disease, diagnosed metabolic disease and other non-orthopedic diseases many of of which were completely unknown 50 years ago.

The staff has changed; the surgeons and orthopedists are still here, but they have been outnumbered by pediatricians. The hospital has gradually expanded its facilities, so that splints, plaster and braces comprise but a small part of the armamentarium to combat disease—oxygen tents, I.V. solutions, test tubes, electrophoresis machines, electrocardiographs and culture tubes, all have assumed increasing importance in the transition of the Children's Orthopedic Hospital to the Children's Medical Center.

The need for changing the name may not be too obvious to those who have grown up with the hospital. To the stranger, however, to the potential intern or resident, to the young physician starting practice in this community, the name Children's Orthopedic Hospital connotes a limited function, unjustified by the facts. In competing on the national level for interns and residents, the word *orthopedic* eliminates the hospital from the consideration of many excellent potential house officers. Consideration for donations or research grants may be unfavorably influenced by the limited scope of care as suggested by the present name.

Acknowledgement of the handicaps and misinterpretation resulting from the name has been made by the medical staff and board of the hospital. In spite of the sentiment, tradition, and community recognition attached to the name Children's Orthopedic Hospital, the board of the hospital has taken steps to legally change the name to The Children's Orthopedic Hospital and Medical Center. The addition of *and Medical Center* brings into perspective the true role of this institution while maintaining the tradition of the Children's Orthopedic Hospital.

JACK M. DOCTER, M.D.
Medical Director

We would not for a moment derogate the role of The Children's Orthopedic Hospital, or that of its devoted supporters, in assisting physicians to render invaluable service to children of the Northwest but we do not believe this decision was a wise one. If the type of service rendered by physicians in the hospital has changed but is now handicapped by an inappropriate word, the offending word should be dropped. Sentiment and the tradition of service to humanity ought to outweigh sentiment and tradition concerning a word. The hospital could very well be known as The Children's Hospital, a name clearly indicating its purpose and one much more easily used. More serious, however, is designation of the institution as a medical center, implying that the hospital offers medical care. It cannot do so. Medical care is given by physicians, not by hospitals. Implication of the name reported by Dr. Docter encourages false concepts of the function of a hospital and does less than justice to those physicians who have made and are making such magnificent contribution to the area's children. Ed.

Excellent recruitment idea

EDITOR, NORTHWEST MEDICINE

I am writing to acquaint you with a program the Whatcom County Medical Society has in operation where we, as a society, sponsor several scholarships for premedical students or students in para-medical fields studying at Western Washington State College. Currently, on a two year basis, our Society has allotted $1400 to be used over the two years.

At the present time one premedical student and one prephysiotherapy student have full scholarships for the current year. If their performance merits it, we will carry these students, and others, at least one more year. Our policy will be reviewed every two years.

We think other county societies may be interested in similar programs, and would appreciate queries or comments.

Sincerely,
J. C. MASON, M.D.
Secretary, Whatcom County Medical Society

Mycetism death registry

EDITOR, NORTHWEST MEDICINE

Publication of the following note in your editorial pages will be appreciated:

The National Registry of Deaths from Mycetism maintains a file of deaths attributed to ingestion of wild mushrooms (1957 to date).

Physicians are requested to send notice of all such deaths (age, sex, date, locality) to the undersigned, at Massachusetts Medical Society, 22 The Fenway, Boston 15, Massachusetts.

ROBERT W. BUCK, M.D.
Secretary

Their own two feet

EDITOR, NORTHWEST MEDICINE

The articles and letters that have appeared in NORTHWEST MEDICINE in the last few issues have been very interesting as well as stimulating. Difference of opinion is what makes life worth while. I've been amused at the quoting of statistics to attempt to prove the points the various authors wish to make.

"Mental Health" is today a very hot subject and is being promoted from all angles, especially by those interested in expansion of federal control. It means one thing to me, and apparently something else to others. Surely there is a difference between mental illness, mental health, and mental retardation. The psychiatrists cover all of these but the general practitioners, internists, and pediatricians, although they see plenty of problems in mental health and certainly too much (one patient is too many) mental retardation, rarely are consulted because of mental illness.

I cannot bring myself to believe that every emotional conflict is potentially serious. Certainly the person, adult or child, who has never met an obstacle, had to make a decision, or adjust to family or life situations, is an unhappy person. The normal individual is the one who can face up to problems and solve them to his own satisfaction and to that of others involved, including society as a whole. To learn to do that is a part of the normal learning and maturing process.

In my opinion, one of our problems today is that there are altogether too many people who have not learned to stand on their own two feet and make decisions for themselves. Too many are acting like the alcoholic who, wallowing in self created misery, begs, "Help me!"

Yours very truly,
FRANK H. DOUGLASS, M.D.
Seattle, Washington

Valuable source

EDITOR, NORTHWEST MEDICINE

Congratulations to NORTHWEST MEDICINE on its 60th birthday. It has in the past and continues to fulfill a very real need in the area of medical communications.

The progress in and excellence of medical education and the practice of medicine in the beautiful Pacific Northwest are accepted as commonplace by today's standards, but they would have been far more difficult to attain and years longer in accomplishment had it not been for the vision, dedication and determined hard work by Dr. Smith and Eagleson and early contributors to your publication.

As the official Association for medical students, we find NORTHWEST MEDEICINE a valuable source of information and are always pleased to note the inclusion of Student American Medical Association news in your pages. We hope that our publication, *The New Physician,* will perform the same function for our members as NORTHWEST MEDICINE has for the physicians belonging to its component sponsoring state associations over these years.

Again, our congratulations and best wishes for continued service.

Very sincerely yours,
RUSSELL F. STAUDACHER
Executive Director, S.A.M.A.

Burma Beckons

EDITOR, NORTHWEST MEDICINE

An excellent opportunity exists for a young American general practitioner with an interest in surgery, to work with famed Burma Surgeon, Gordon S. Seagrave, at his 250-bed hospital in Namkham, Burma. Minimum appointment is for two years. With satisfaction, an extended tenure would be encouraged.

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Continued on page 290

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REFERENCES: (1) Baker, A. G.: Penn. Med. J. *63*:697 (May) 1960. (2) Smith, R. T.: New York Med. (Aug. 20) 1952, pp. 16-19. (3) Smith, R. T.: Med. Clin. N. Amer. (Mar.) 1957. (4) Lehrer, H. W.; Lehrer, H. G., and Lehrer, D. R.: Northw. Med. (Nov.) 1955. (5) Sforzolini, G. S.: Arch. Ophthal. *62*:381 (Sept.) 1959.

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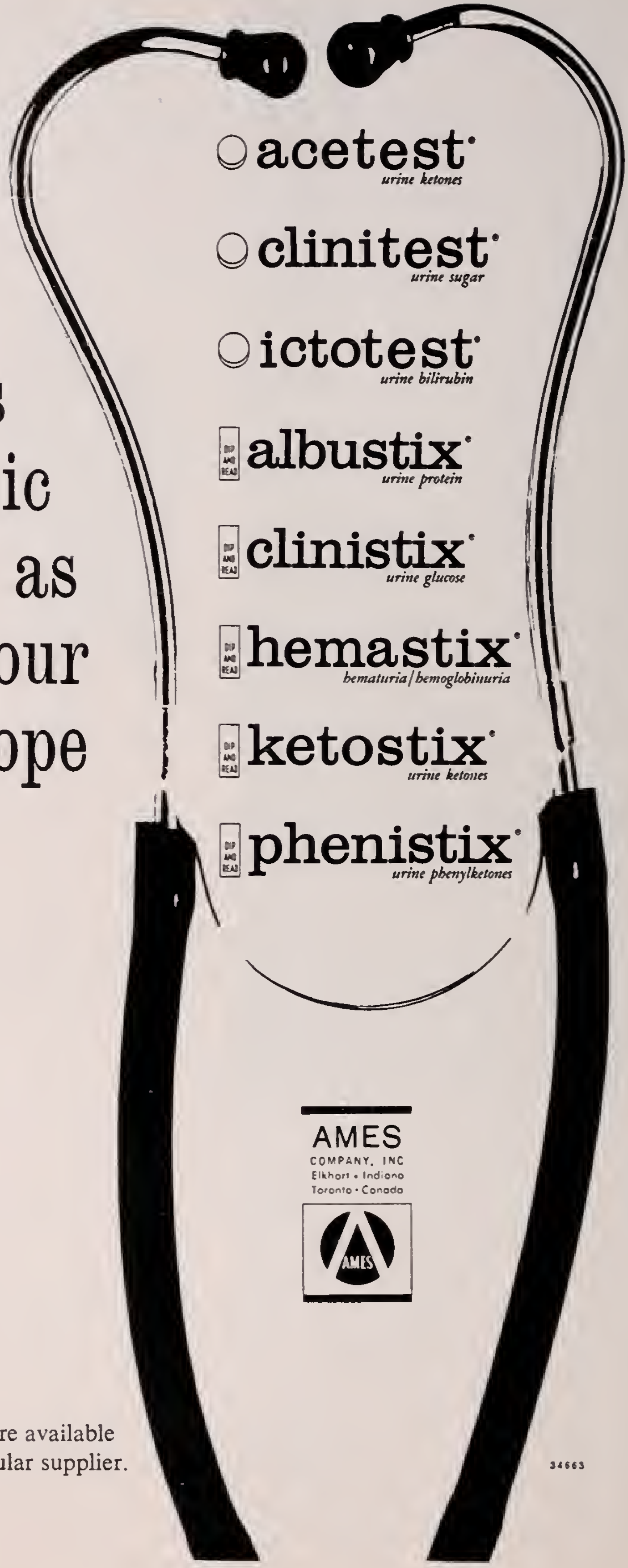

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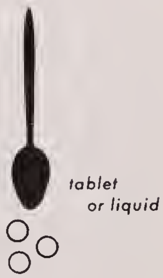

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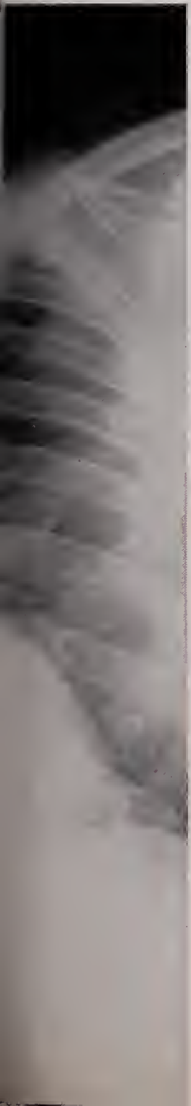

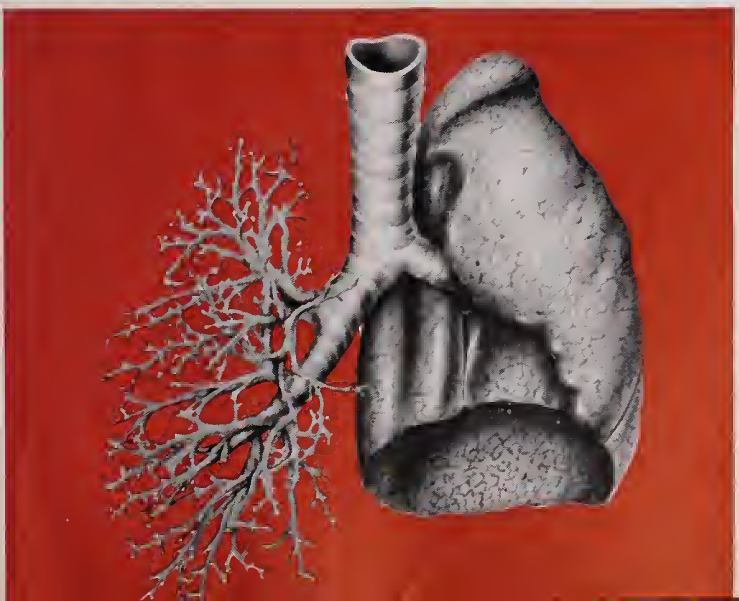

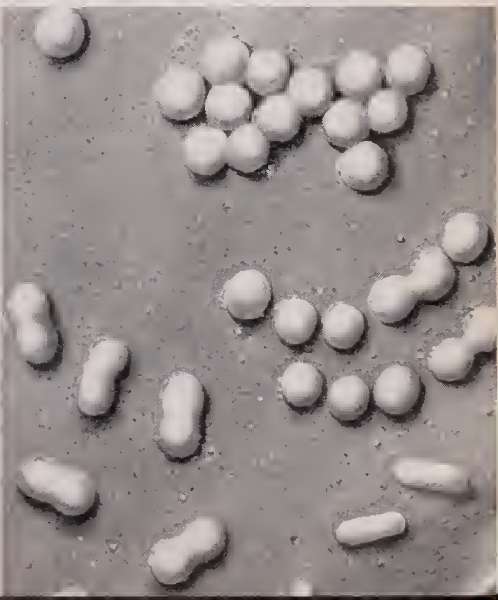

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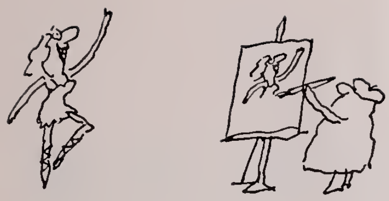

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*Scal, J. C.: Eye Ear Nose & Throat Month. 38:738 (Sept.) 1959.

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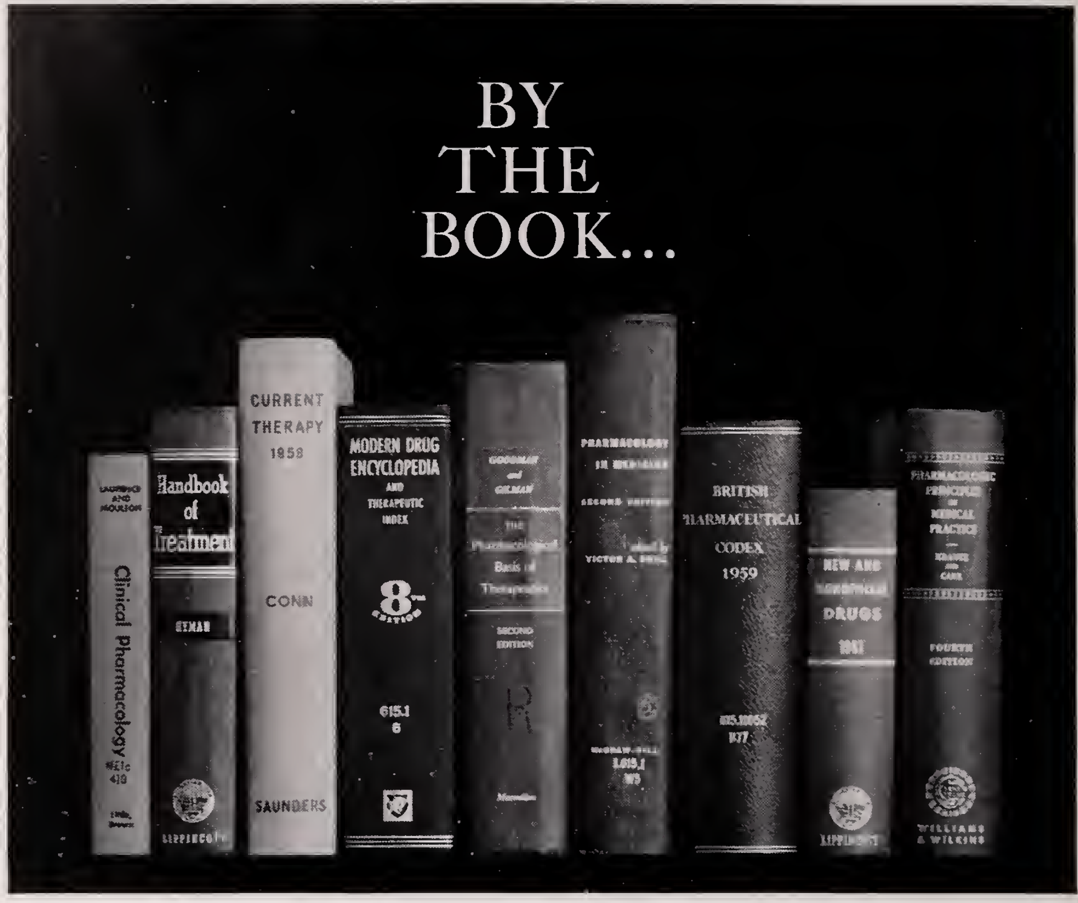

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Extending the Process

Observers in Washington, D. C., have been commenting on recent changes in the theory of government. The original concept of a government of laws is being discarded, they say, in favor of a government by men. Key word in the process is *program.* To fill a need, either real or fabricated, there must be a program. Distribution of benefits of the program is controlled by men. As more government money and more government men are devoted to programs, the government becomes one more of men than of laws. There are inumerable examples.

One of the most persistent spawners of programs is the United States Public Health Service. According to *GP*, the Public Health Service called a conference last November to discuss a program for improvement in communication.[1] Certain program minded politicians have complained that results of research supported by the National Institutes of Health have not been reported promptly to practicing physicians. The cure for this deficiency is, of course, another program. In the *GP* report it is stated that 14 of 22 proposals at the conference were of primary importance. One of these was objectionable and another, as stated by Mr. Cahal, Executive Director of the Academy of General Practice, hair raising.

Proposal number 7 at the conference declared that USPHS should assume full responsibility for all postgraduate education of physicians in the country. Number 11, the hair raising proposal, called for PHS to employ a great staff of experts who would travel about the country, calling on physicians. They would conduct face to face interviews to tell physicians how they should be practicing. This would be postgraduate education by the detail man technique, under control of the Secretary of Health Education and Welfare.

Another program launched recently by PHS is one reviewing applications to the service for publication support.[2] A committee responsible to the Surgeon General PHS has been named to pass on all such publication of scientific material. Purpose, according to Surgeon General Terry, is to help improve communication of results of research from scientists to health practitioners.

Thus government grows and extends its power. Government builds hospitals and facilities for diagnosis and treatment. Government pays for research. Government wants to support medical education. Government has declared its intention to furnish medical care for the aged. Now Government wants to provide all postgraduate medical education.

One of the world's most astute political observers discussed this development more than a hundred years ago and made a remarkably accurate forecast, based on his analysis of the manner in which it would be permitted to grow. Alexis de Tocqueville first published "Democracy in America" in 1835. In it he said:

> I think, then, that the species of oppression by which democratic nations are menaced is unlike anything which ever before existed in the world: our contemporaries will find no prototype of it in their memories. I seek in vain for an expression which will accurately convey the whole of the idea I have formed of it; the old words of despotism and tyrany are inappropriate: the thing itself is new, and since I cannot name, I must attempt to define it. . . . The first thing that strikes the observer is an inumerable multitude of men, all equal and alike, incessantly endeavoring to procure the petty and paltry pleasures with which they glut their lives. . . . Above this race of men stands an immense and tutelary power, which takes upon itself alone to secure their gratifications, and to watch over their fate. That power is absolute, minute, regular, provident and mild. . . . For their happiness such a government labors, but it chooses to be the sole agent and the only arbiter of that happiness; it provides for their security, foresees and supplies their necessities, facilitates their pleasures, manage their principal concerns, directs their industry, regulates the descent of property, and subdivides their inheritance: what remains but to spare them all of the care of thinking and all the trouble of living?

What de Tocqueville alone saw then is quite apparent now, to anyone who cares to look. Those who look again at the frightening offers made by the Public Health Service might wonder if he had seen quite far enough. He foresaw what would be done to the common man. Did he realize how far the process would be extended in effort to control a learned profession?

---

[1] USPHS Communications Conference Proposals Bear Watching, News, GP 27:267, 269, (March) 1963.

[2] PHS Establishes Publication Committee, Miscellanea Medica, JAMA 183:adv p 49, (Mar 16) 1963.

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Mallory-Weiss Syndrome

ROBERT W. KENDALL, M.D. Portland, Oregon

The surgeon is often faced with the problem of acute, massive, upper gastro-intestinal hemorrhage, the cause of which is not readily established. A rare, but often fatal, cause which must be considered in such cases is the Mallory-Weiss syndrome. This paper gives a brief historical review as well as the diagnosis and treatment of this condition on the basis of experience in three cases.

When the Mallory-Weiss syndrome was first described in 1929, the original observers felt that this disease was caused by an alcoholic debauche followed by vomiting which led to cardio-esophageal lacerations. Massive hemorrhage was a common and often fatal result. In their original publication, Mallory and Weiss described 15 cases of this syndrome, only four of which were proved at autopsy.[1]

An interesting experimental study was also reported in that same paper. The pylorus of a fresh cadaver stomach was tied off and the stomach was filled with water. Then, with the esophagus partially occluded, pressure was exerted upon the stomach. This caused dilitation of the cardia producing lacerations identical to those seen in their clinical cases. They postulated that this same pressure mechanism was in force during the act of severe vomiting. In 1932, they described six more cases, only two of which were proven at autopsy.[2]

It was not until 1953 that this syndrome again appeared in the literature, when Decker, Zamcheck and Mallory added eleven new cases and discussed the pathology of the lacerations.[3] All of these cases were proven at autopsy and they felt that alcoholism did not play as important a role as was originally thought. They again verified the one common denominator in this syndrome—vomiting. In 1954, Kellogg and Backburn added three more cases of this syndrome, and these were all autopsy cases.[4] In 1955, Whiting and Barron reported the first case of the Mallory-Weiss syndrome which was treated surgically.[5]

In 1956 Hardy reported a case that was diagnosed by gastroscopy.[6] A 2 cm laceration was seen in the cardia, 3 cm below the gastroesophageal junction. In that case the bleeding had stopped and the patient recovered without surgery. Since that time other cases have been corrected surgically but thus far only thirteen such cases, including the cases in this paper, have been reported.

CASE REPORTS

Case 1. A 40 year old white male entered the Portland Veterans Administration Hospital, January 29, 1955, because of massive hematemesis. For two hours prior to admission he had vomited repeatedly, and his last emesis consisted of about one quart of clotted blood. There was no history of alcoholism, but for several years the patient had had epigastric burning pain, relieved by antacids or milk. He also had hepatitis, with jaundice, of six months' duration, during World War II.

The patient was a husky young male, who was pale, perspiring and complaining of thirst. Blood pressure was 110/60, pulse 100. There were no abdominal masses and there was no tenderness. Bowel sounds were active. Rectal examination recealed normally colored stool. During the examination he vomited about 750 cc of fresh blood. Hemoglobin was 13.5 gm and hematocrit was 44.

A clinical diagnosis of bleeding duodenal ulcer was made. Intravenous isotonic saline was started and Dextran was added until whole blood was available. Esophageal tamponade was not used. Seven units of whole blood were given prior to surgery. At operation, no duodenal ulcer was found. The duodenum was transected just below the pylorus and at that time it was noted that blood was coming from the upper stomach. A longitudinal anterior gastrotomy was made and after some difficulty in obtaining exposure, a bleeding vessel was seen in the bed of a laceration across the cardio-esophageal junction. Esophageal tamponade was instituted with a Sengstaken-Blakemore tube. It stopped the bleeding. In order to attack the area of bleeding directly, a thoraco-abdominal incision would have been necessary but it was elected not to use that approach because of the patient's poor condition. Therefore a 75 percent gastrectomy with Hofmeister-Polya anastomosis was performed and the tamponading balloon was left in place. Postoperatively, there was no more bleeding, but the patient's condition deteriorated and he died 36 hours after admission.

Autopsy revealed bilateral partial atelectasis with pulmonary edema and hyperemia. Cerebral edema was also present. The bowel contained dark blood. In the lower esophagus, there was a longitudinal, 2.5 cm by 0.5 cm laceration, with its lower end just across the cardio-esophageal junction, Fig. 1. This laceration extended through the mucosa and submucosa to the muscularis, Fig. 2. At the distal end of the laceration, there was an open arteriole and an open vein.

Case 2. A 50 year old white male was admitted to the Portland Veterans Administration Hospital on February 23, 1957, because of hematemesis and non-radiating substernal burning pain. Six hours prior to admission, he became nauseated after eating and began to vomit. Blood appeared after about thirty minutes of severe vomiting. Within a short time he lost a quantity of gross blood estimated at two quarts. There was no previous history of ulcer, but he was known to be a chronic alcoholic.

The patient was very restless, and pale. Blood pressure was 80/50, pulse 120. He vomited blood during the examination. There was no abdominal tenderness. The liver was palpated three fingerbreadths below the right costal margin. There was red blood in the rectum.

Hemoglobin was 8.0 gm, hematocrit 32. The bromsulphalein retention was 9.5 percent in 45 minutes.

A naso-gastric tube was passed and about 500 cc of fresh blood was removed from the stomach. The bleeding did not subside, so a Sengstaken-Blakemore tube was passed in effort to control it. This method of esophageal tamponade was not effective. During this time the patient had received eight units of blood. He was taken to surgery with a preoperative diagnosis of bleeding peptic ulcer.

A left paramedian incision was made and after exploration, it was determined that the duodenum was normal. A long anterior gastrotomy was made and the bleeding could be seen coming from the proximal stomach. The approach was converted from abdominal to thoraco-abdominal by incision through the left eighth interspace. The esophagus was mobilized and an anterior incision was made across the cardio-esophageal junction. A 3 cm, longitudinal laceration was seen on the posterior surface of the cardia of the stomach. The proximal end of the laceration was at the cardio-esophageal junction and a briskly bleeding arteriole was seen in the base of the laceration. The bleeding point was controlled with a transfixion suture of fine silk. The mucosa was closed with fine catgut. The gastrotomy incisions were closed in two layers. A chest tube was placed in the left pleural space, a Penrose drain was used to drain the left upper quadrant, and the wound was closed. A naso-gastric tube was used for three days for gastric decompression. The patient's postoperative course was uneventful and since his discharge he has had no subsequent bleeding or distress.

Case 3. A 41 year old white male was admitted to the Portland Veterans Administration Hospital, December 14, 1957, with massive upper gastrointestinal hemorrhage. He was a chronic alcoholic who had recently been under treatment at a local sanitarium. Emetine had been used in his treatment and had caused severe nausea and vomiting. At 9:00 am on the day of admission he received a dose of emetine which caused about twenty minutes of severe vomiting. Toward the end of this episode, the vomitus contained bright red blood. In the past, he had had symptoms of duodenal ulcer, but they had not been severe enough to require his hospitalization. He had consumed a fifth of whisky daily for several years prior to taking treatment for alcoholism.

The patient was semi-comatose and sweating profusely. Blood pressure was 50/0, pulse 180. There was slight tenderness in the epigastrium. Bowel sounds were normal and no masses or organs were palpable. Rectal examination was negative.

Hemoglobin was 11.6 gm, hematocrit 36, white cell count 10,000. Bleeding and coagulation times were normal.

A Sengstaken-Blakemore tube was passed and both balloons inflated. This did not control the bleeding. A Linton tube was passed and the balloon inflated with 500 cc of air. After two pounds of traction was applied to the tube, the bleeding stopped. A diagnosis of Mallory-Weiss syndrome was made and the patient was taken to surgery. Twenty-five hundred cc of whole blood, and 1500 cc Dextran, were given preoperatively. The abdomen was opened through a left upper rectus incision. A long anterior gastrotomy was made and blood could be seen coming from the proximal end of the stomach. Without extending the abdominal incision, it was possible to mobilize the distal esophagus permitting a 6 cm incision to be made on the anterior surface of the esophago-gastric junction. A 1.5 cm longitudinal laceration with an active bleeding point was found on the left postero-lateral aspect of the cardia about 1 cm below the esophago-gastric junction. This laceration was oversewn with a running suture of fine catgut, which controlled the bleeding. The esophago-gastrotomy and the anterior gastrotomy were closed in two layers. It was elected to use gastrostomy drainage of the stomach rather than naso-gastric drainage because of possible irritation at the cardio-esophageal junction. A Stamm gastrostomy, using an 18 Foley catheter, was made in the anterior portion of the stomach. The tube was brought out through a stab wound in the upper left quadrant. The postoperative course was complicated by right lower lobe atelectasis which required bronchoscopy and frequent tracheal suction. After his discharge from the hospital there has been no further evidence of gastrointestinal bleeding.

discussion

Cardio-esophageal lacerations have been attributed to protracted vomiting. The cases presented here bear out this etiology. The other possible causes, such as blunt trauma, chronic alcoholism, or atrophic gastritis, seem to be only coincidental findings. The duration of time between the onset of vomiting and the hematemesis is quite variable. In some cases hematemesis and vomiting start almost simultaneously and in other cases vomiting precedes hematemesis by many hours.

Vomiting will cause a very high intra-luminal gastric pressure. It has been demonstrated that the weakest point in the stomach, when the intra-luminal pressure increases, is the cardio-esophageal region. Many times one may observe severe vomiting with no untoward effects. How-

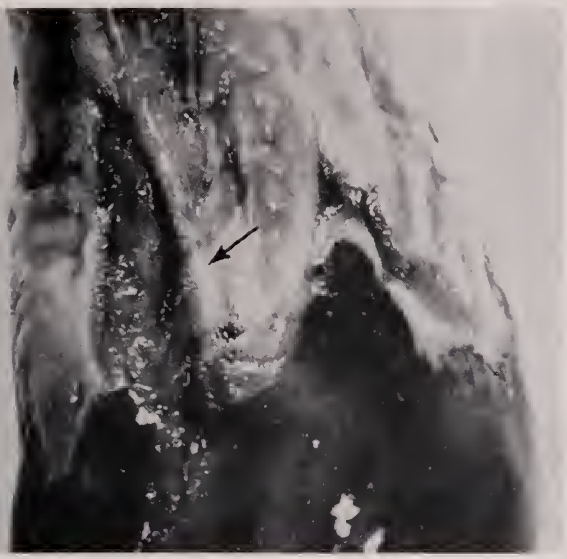

Fig. 1. Photograph showing the cardio-esophageal junction with a longitudinal 2.5 cm laceration. The distal end extends for a short distance into the cardia. Note the normal mucosa.

ever, not infrequently after severe vomiting, one may see very mild, transient hematemesis. In such instances a small mucosal laceration may have occurred.

The mucosa of the stomach and the esophagus in all of our cases appeared to be normal, and indeed it has been in nearly all of the recently reported cases. It should be emphasized that inflamed or abnormal mucosa is not a prerequisite for these lacerations.

characteristic appearance

Actual size of the lacerations is quite variable. They may be as long as 7 cm, or they may be as short as 0.5 cm. They may be single or multiple. In one case, five lacerations were reported.

Usually the lacerations are longitudinal or oblique, but they are never transverse. They are also very clean, almost as if they had been made with a scalpel. The most common location is on the left postero-lateral wall of the cardia but they may occur any place around the circumference of the cardia. They may be entirely within the stomach, across the cardio-esophageal junction, or in the esophagus. They usually extend through the mucosa and submucosa, down to the muscularis. It may be postulated that many superficial lacerations of this type occur, but unless they actually tear an arteriole they probably do not become clinically significant.

It is interesting to compare the Mallory-Weiss syndrome with the so-called spontaneous rupture of the esophagus. In this disease also, it is noted that the one factor common to all cases is severe vomiting. The spontaneous perforations practically always occur in the lower third of the esophagus on the left side and some of these extend across the cardio-esophageal junction. It seems likely that these two conditions may be caused by a similar mechanism and that perforation may be a manifestation differing from the Mallory-Weiss lacerations, only in degree.

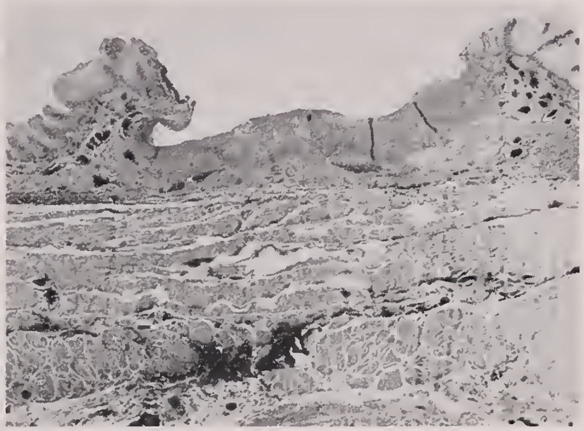

Fig. 2. Photomicrograph of a cross-section through the esophageal portion of the laceration. Note that the laceration extends through the submucosa, and note the large submucosal vessels.

management

Surgical management of this problem is not difficult if the diagnosis is made preoperatively. In any patient who has had severe vomiting followed by massive hematemesis, this disease should be considered. If the diagnosis is made, the bleeding can sometimes be temporarily controlled with the use of cardio-esophageal tamponade. However, in many of the reported cases, tamponade was ineffective.

Adequate exposure can be gained through an upper midline incision. The most common preoperative diagnosis for massive bleeding is peptic ulcer and this area can be explored first. If the duodenum is normal, an anterior gastrotomy should be made and it can be determined if the blood is coming from higher in the stomach. If this is the case, the rugal folds in the cardia of the stomach should be closely examined for bleeding lacerations. If none are found in this area, the distal esophagus should be mobilized and brought down into the abdomen. The lower 5 or 6 cm of the esophagus can be mobilized without too much difficulty and, in many cases, it should not be necessary to do a thoracoabdominal incision. If necessary, a separate incision can be made across the cardio-esophageal area to expose the mucosa of the lower esophagus. When a laceration is encountered, the bleeding can be controlled very easily with a continuous suture of fine catgut. In the postoperative period, the stomach should be decompressed to lessen the likelihood of postoperative vomiting.

summary

The Mallory-Weiss Syndrome is a rare, but often fatal, cause of upper gastro-intestinal hemorrhage. The disease is characterized by longitudinal mucosal and submucosal lacerations of the cardio-esophageal region. Vomiting is the etiologic agent and severe bleeding is the result if an arteriole is torn.

The key to the correct diagnosis and treatment of this condition lies in being aware of the condition. If the laceration is superficial, the bleeding may be controlled with balloon tamponade. If this method is not effective, surgery is indicated.

At surgery an anterior gastrotomy should be made to ascertain where the bleeding arises. If blood is coming from the esophago-gastric region, the distal esophagus should be mobilized and a longitudinal incision made across this region. The lacerations, which may be multiple, can then be seen easily and oversewn. With this treatment a successful result can be expected.

404 Medical Arts Building (5)

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Readable Writing

LESLIE M. LeCRON, B.A. Los Angeles, California

The reader of medical and other scientific journals is probably a busy individual, trying to keep up with research and recent developments in his particular field or specialty. Undoubtedly the physician with a busy practice does not have much time to devote to this important necessity. In going through a medical journal he will probably read the concluding summary of an article whose title interests him. If it is of very great interest he may then read the entire paper.

What does he find as he labors slowly through some of the "literature" which he feels is important? Much of it will contain long-winded material, made up of as many five and six syllable technical words as the writer is able to think of. He will have to contend with long, often poorly constructed, sentences and the most boring of writing style. The editor of any popular magazine would toss almost any scientific manuscript into the wastebasket as soon as he tried to digest the first paragraph. His magazine would soon fold if its readers were required to absorb this mass of undigestible hyperposyllabic sesquipedalian, philological verbiage. Or should we just say "scientific gobbledegook."

some editors like clarity

For some mysterious reason, the scientific writer seems to feel that he is not "scientific" and is not erudite, if he writes simply and clearly. To crack a joke or include any humor in such a paper would be unthinkable. It is problematic whether most editors actually want the orthodox style in such articles or merely take them because of custom. Probably some would regard a more popular style with lifted eyebrow, if simple, easily read and really interesting. However I believe some would welcome more readable material. Obviously the editor of this journal must fall in this category or you would not be reading these words!

As the author of several textbooks, a number of

Mr. LeCron, a California State Certified Psychologist, has written extensively in the field of hypnosis.

technical journal articles and some popular books and magazine articles, I have found it necessary to write with both these styles and have not found it easy to change from one style to the other to conform to editorial requirements. I tried once to write simply and, as I thought, very clearly, in a technical paper. The subject was undoubtedly of much interest to those in the particular field in which I wrote. The paper was rejected as unsuitable. Rewritten, with longer words and more technical construction, it was accepted, apparently because it conformed. On the other hand, when writing for popular publication, some editors have asked me to rewrite portions of the manuscript where scientific jargon was inadvertently used.

more reading in less time

Are editors who deal with the general public wrong in seeking simplicity? Of course the style of writing an article for *Escapade* would certainly differ from that of one for *Harpers* or *The Saturday Review*. But the magazines which are considered literary demand simplicity, short sentences and paragraphs, lucidity and compactness. It is ridiculous to think that readers of such high-class magazines differ greatly in education and intelligence from physicians and other scientists. I would give long odds that a medical article written in simple style would be read thoroughly by ten times the number of those who would wade through the same article done in orthodox style. It would also be read in half the time. You will read at far greater speed when simple style is used in writing. This is important to the busy physician. Undoubtedly the informal word and unpretentious style would be welcomed by all who read medical and other scientific articles.

In one of my books, a part was made up of articles written by physicians in different medical specialties. One of the best of these articles as to material and general interest contained one sentence of 187 words! Yet the paper was very well done according to orthodoxy.*

For any reader, the subject matter must be of interest or the article will not be read. If it contains only dry statistics it will be boring no matter how much interest there is in the subject. Good writing will reflect the personality and individuality of the writer. If a physician should write as though he were talking to another physician, the product would be much easier to read. Writing style ought to reflect the individuality of the author.

the way to write

For those who might like to try their hand at a more popular style, some of the requirements can be cited. While sentences should generally be short, they should not be abrupt and there should be variation in length. Trite, hackneyed and indefinite expressions should be avoided. A paragraph should deal with a single subject but if long should be broken into two or more for easier reading.

Clarity is essential and simplicity makes for better communication, which is the whole purpose of writing. The general requirements and form of all technical articles can be followed and yet your manuscript can conform to good writing style. Much can be learned from a close study of articles in the more literary type of popular magazine. Any physician certainly has education enough to write reasonably well, if he follows basic principles.

In considering a paper submitted to a medical journal, I believe many editors would welcome a change in "scientific" style but might appreciate a letter of explanation of your purpose. The medical degree or affiliations of a writer on medical subjects, or both, are enough to establish his authority. He does not have to demonstrate it by words but can make it obvious by the content of what he writes. I think most technical editors would welcome more readable articles and it is certain that readers would appreciate them.

summary

Busy physicians do not have time to wade through tediously written material, no matter how interested they may be in the subject being discussed. They would be better served by less difficult reading. Too many complex words and too many long, involved sentences produce a kind of literature that might be best described as scientific gobbledegook. Writing style ought to reflect the individuality of the author. If it is simple and clear, the reader will read more, in less time, and understand better. Medical writing does not have to be stuffy or dull. It would be much more interesting and much more useful if authors would use plainer words, shorter sentences, more compact paragraphs and more direct style. ■

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*Rudolph Flesch, in his excellent book, The Art of Readable Writing, says, "—when we yield to the temptation of pompousness we get downright monstrous and write sentences no man has ever said aloud." Ed.

Pulmonary Physiology in Clinical Practice

IV. Interpretation From Office Testing

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If he thinks about it at all, the private practitioner probably pictures the pulmonary function laboratory as an emporium supported by grants or taxes, having several thousand square feet of floor space, and using several hundred thousand dollars worth of apparatus.

Actually, *about 80 per cent of patients needing function studies can be intelligently evaluated in the physician's office with less than $300 worth of equipment.* Asymptomatic pulmonary disease, in a treatable stage, may be detected as frequently by these simple function studies as arterial hypertension is found with the sphygmomanometer. Furthermore, by these methods, emphysema may be recognized in an early stage when treatment may prevent development of irreversible structural change in the lungs.

Simple methods for detection of abnormalities of *ventilation* are readily adaptable to the physician's office (or, for that matter, his bag). Knowing the severity of the ventilatory abnormality and patient's medical history and clinical findings, it is possible to predict abnormalities at the *ventilation-perfusion, membrane permeance,* and *shunt levels.*

chest x-rays

Chest x-rays, as applied to estimation of lung function, are most useful in evaluating those disease processes associated with *static* impairment of lung *volume,*[1] or *size,* and are least reliable in the study of *dynamic* functional impairment, as found in obstructive bronchopulmonary disease accompanied by reduced *flow rates.*

The chest x-ray is comparable to the vital capacity in revealing the presence of *restrictive* lung disease. *Diffuse pulmonary fibrosis* can be suspected and *membrane permeability abnormalities* inferred (Fig. 1).

Motion of the chest wall and diaphragm may be evaluated with fluorscopy, but the value of this method of studying dynamic lung function is seriously limited because it lacks quantitation.

The presence of *hypoventilation, obstructive airway disease* with *abnormalities of expiratory flow,* and *ventilation-perfusion abnormalities* may not even be suspected from the chest x-ray. In a recent study, only 21 per cent of patients with some degree of airway obstruction had chest x-rays showing all four of the usual diagnostic criteria for "emphysema", namely: (1) a large chest volume with boxlike configuration, (2) low, flattened diaphragms, (3) hyperlucent lungfields, and (4) a small heart.[2] When any two of these

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From the Institute of Respiratory Physiology, Firland Sanatorium, and the Cardio-Pulmonary Laboratory, Providence Hospital Heart Center, Seattle.

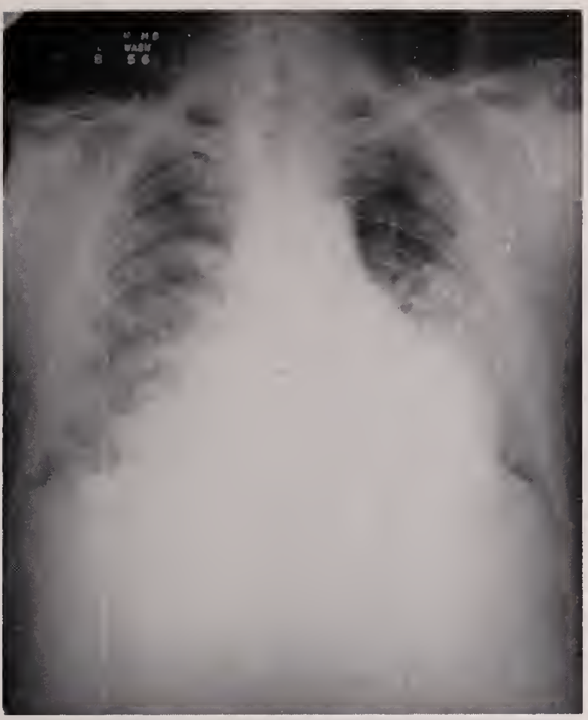

Fig. 1. Pulmonary fibrosis. Film suggests restrictive defect with reduced lung volume.

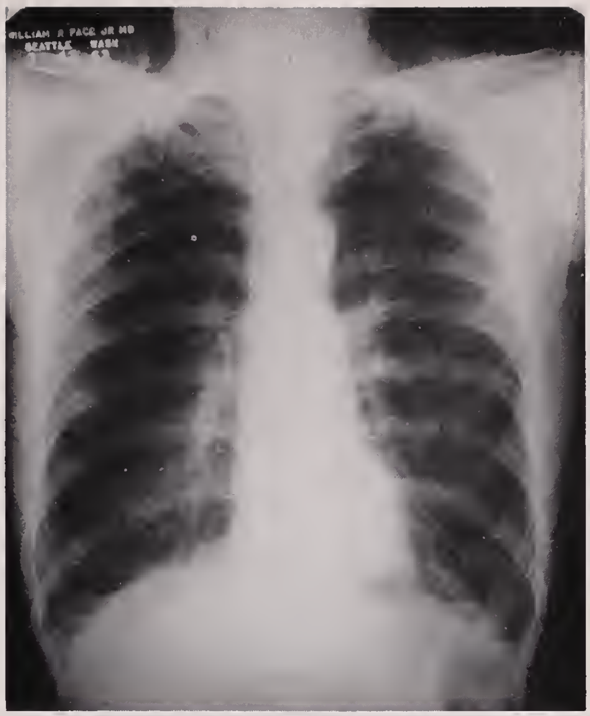

Fig. 2. Typical appearance of pulmonary emphysema with increased lung volume, low flat diaphragms, hyperlucent lung fields, and small heart.

criteria were used for diagnosis of airway obstruction, 50 per cent of the patients so selected had normal flow rates (Fig. 2).

The most valuable contribution of the chest x-ray is actually the information it supplies about the pathologic state. This is of help in choosing indicated tests.

methods for measuring vital capacity

The subject of lung volumes and restrictive disease was discussed in the article on abnormalities of ventilation.[3] The reader will recall that measurement of vital capacity is often substituted in practice for that of total lung capacity.

Portable equipment is available for measuring vital capacity. The commonly used bellows type appartus (McKesson) provides a reproducible measure of volume, but in those tested in the laboratory there is a fixed error on the low side when compared with volumes measured with a Benedict Roth Spirometer. The bellows device is somewhat too bulky to carry in a diagnostic kit, but it does provide an acceptable measure of vital capacity. The flow rate attachment commonly used on the bellows system, however, shows a much greater error and cannot be considered acceptable.

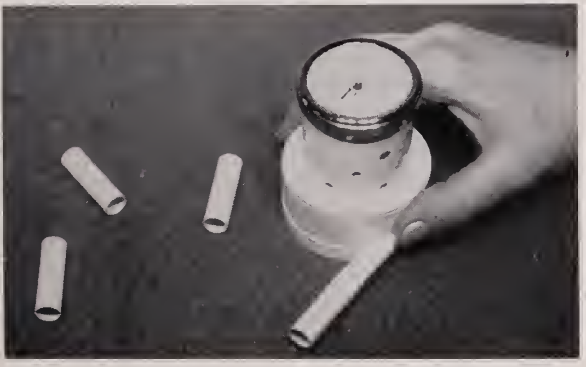

Fig. 3. Propper spirometer, with disposable mouth pieces.

The Propper Spirometer is a smaller instrument which uses the rotometer principle (Fig. 3). It has two faults. With a very low flow rate part of the expired air may sneak by the rotometer and result in a reading in error on the low side. If the volume is forcibly expelled, an overshoot may be produced, resulting in an erroneously high vital capacity reading.

With suitable coaching of the patient to produce moderate flow rates, however, the absolute readings on the rotometer are quite comparable to those obtained with the Benedict Roth Spirometer (Fig. 4). The predicted values published by the manufacturers of the Propper Spirometer do not include an age factor and are not as useful as the more commonly used table of predicted vital

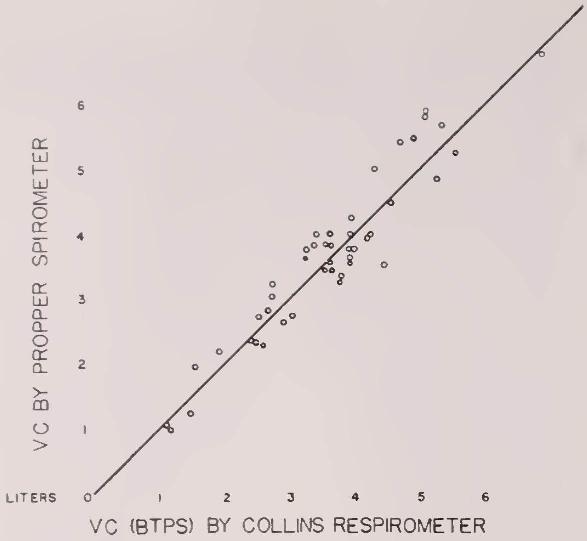

Fig. 4. Comparison of vital capacity measurement as determined by Propper spirometer, with determination by Benedict-Roth spirometer.

capacities prepared by Baldwin, Cournand and Richards.[4] This instrument has reproducibility almost equal to that of the bellows described above, and its portability and size are advantages. It costs approximately $60.

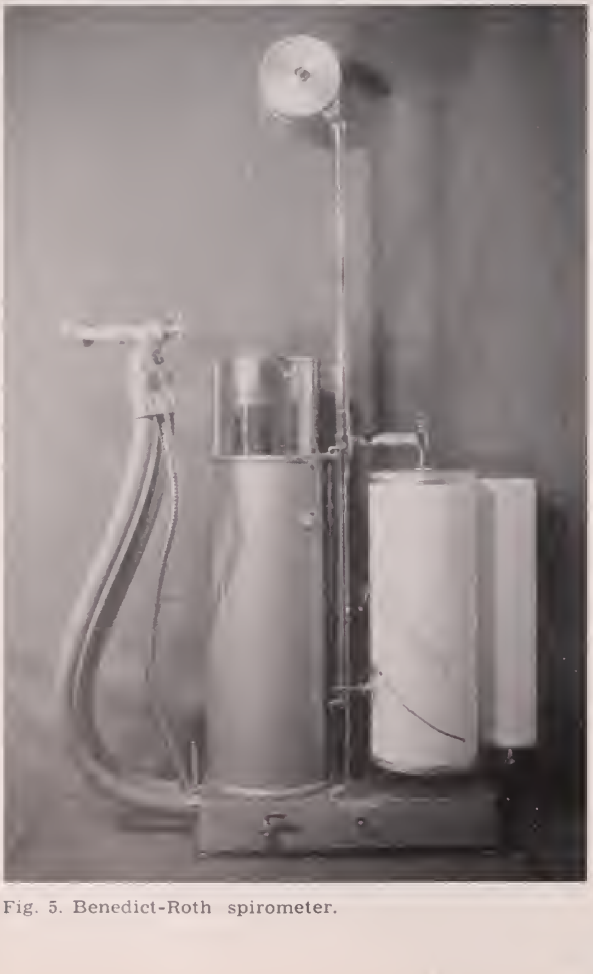

Fig. 5. Benedict-Roth spirometer.

The Benedict Roth type spirometer will measure both volume and flow rate, and in addition may be used to measure ventilation and oxygen uptake (Fig. 5). It is the generally accepted, final reference for accuracy of gross ventilatory studies. Tests performed with this instrument, however, require more time and greater technical skill than do those using simpler equipment. Tests must be conducted carefully and calculation of results must be accurate. These considerations, added to the fact that it costs over $500, preclude it from being a simple office tool.

For the economy-minded, a method can be devised for acceptable vital capacity measurement at a cost of less than one dollar (Fig. 6). A large polyethylene bag is tied to the end of a one-foot section of rubber tubing in such fashion that the bag can be filled or emptied through the tube. The patient is instructed to blow his vital capacity volume into the tube and thus partially fill the bag. At completion of expiration the tube is clamped. Then the end of the tube is placed into a two-gallon glass jug which has previously been filled with water and inverted with the mouth in a pan of water. The air is forced out of the bag. The bubbles will, of course, rise in the inverted jug, displacing a volume of water equal to the volume

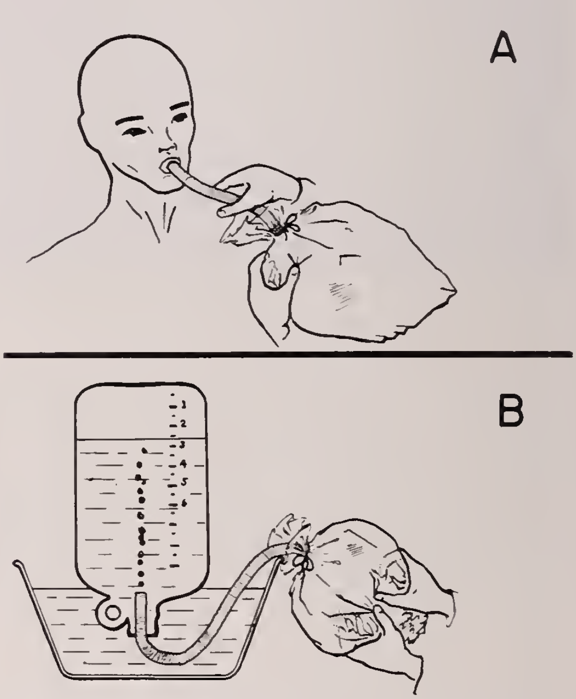

Fig. 6. Simple, inexpensive method of vital capacity measurement. Vital capacity volume is exhaled into polyethylene bag, (A); volume of gas is measured by displacement of water from jug, (B).

of the gas. Then, with the mouth of the jug closed with the finger (or a cork), the jug is turned upright. The partly-filled jug is completely filled with water from a graduate (or even a quart-size kitchen measuring cup). The volume of water required to fill it is equal to the vital capacity. As an alternative, the jug can be marked in 100 ml. graduations with ordinary fingernail lacquer or adhesive tape.

obstructive defects

The only adequate measure of obstructive airway disease is the rate of air flow. Much emphasis is currently being placed on emphysema and there is growing concern over its incidence. Whatever the classification of emphysema learned in medical school, there is no disability from any grade of the disease without obstruction to airflow.

There is a growing tendency to describe the entity as a symptom and function complex and label it *Diffuse Obstructive Pulmonary Syndrome (DOPS)* or *Chronic Obstructive Pulmonary Disease (COPD)*. This involves a larger concept of the natural history of the disease and makes "emphysema" the late or irreversible stage of DOPS. When we diagnose the patient as having emphysema we are probably too late by ten years or more to do anything curative for him. (This does not mean that he cannot be treated. There is much that can be done in supportive care for the patient with pulmonary decompensation, just as there is for the decompensated cardiac patient.)

Early in the course of DOPS, when a "cigarette cough" and sputum are the only symptoms, and reduction in the expiratory flow rate is the only diagnostic sign, the disease may be treatable. *The expiratory flow rate should be measured in all patients over the age of 30, just as the blood pressure is measured, in routine physical examination.* Abnormal flow rates should be viewed with the same degree of suspicion that an elevation in diastolic pressure warrants, and with progression of the DOPS, vigorous treatment should be undertaken, even as one would treat progressive hypertension.

flow rate measurement

Confusion may arise in the mind of the reader as a result of some of the recent changing of names of well established methods of flow measurement. The *Maximal Breathing Capacity (MBC)* has recently been referred to as the *Maximal Voluntary Ventilation (MVV)*.[5] *Timed Vital Capacity (TVC)* is now sometimes called the *Forced Expiratory Capacity (FEC)*.[6]

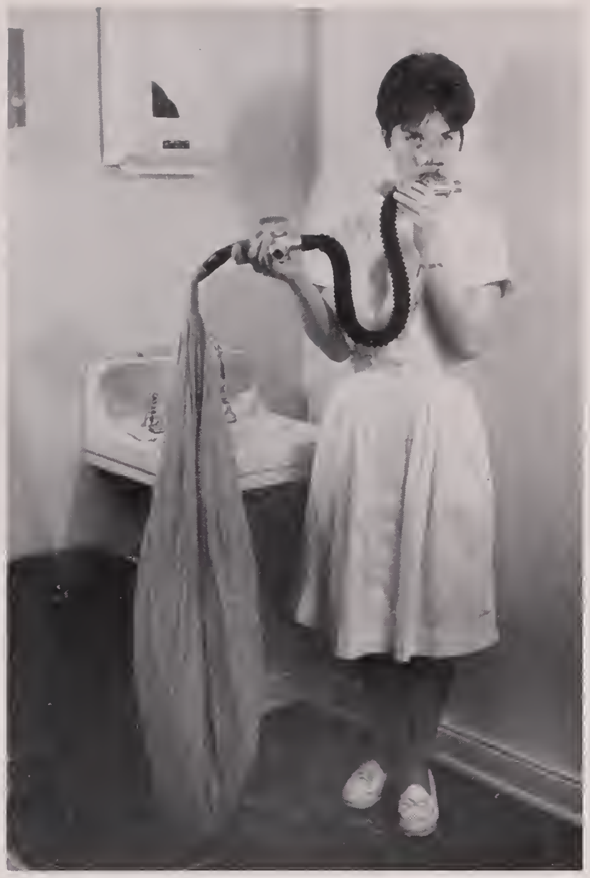
Fig. 7. Darex balloon with three-way aluminum stop-cock and two-way valve assembly which may be used to measure resting or exercising ventilation or maximal breathing capacity.

The simplest test of flow rate is the *match test*,[7] which has been described in the earlier article on ventilatory abnormalities. It will be remembered that this test is based on a patient's ability to blow out a paper bookmatch held six inches from the wide open mouth. Attempts have been made to correlate the match test with other standardized flow measurements. It is not a sufficiently sensitive test to pick up mild or moderate defects, but can confirm the presence of severe obstructive airway disease.

The MBC is a venerable measure of expiratory flow with which other measures are often compared. It is probably not a sufficiently sensitive test of obstructive airway disease, and other methods may be preferable to pick up early abnormalities. The MBC may be measured in the office, using the Warring-Siemsen Ventube (cost $85).[8] It can also be measured with a Darex Balloon, a three-way aluminum stopcock, a two-way

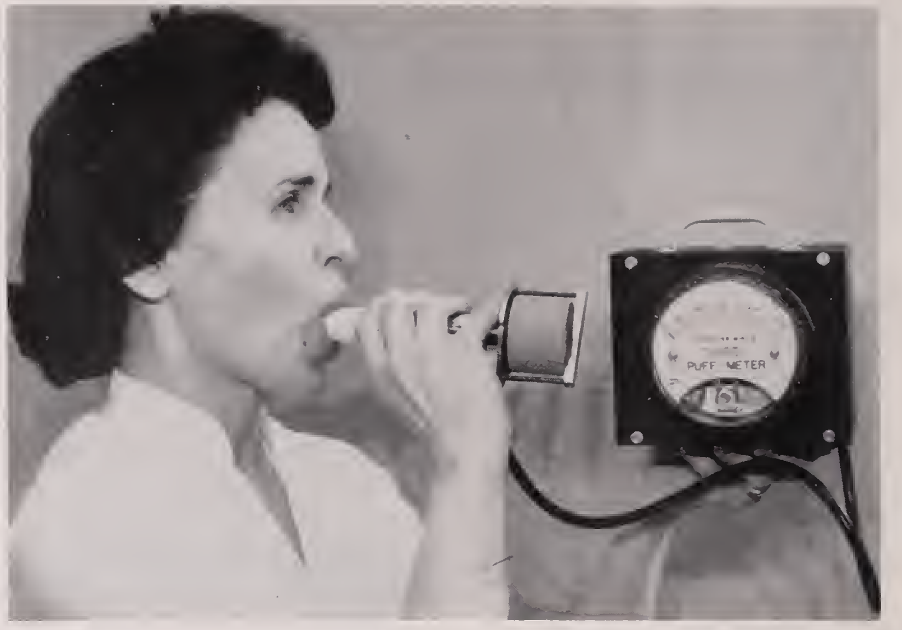

Fig. 8. Puffmeter for direct measurement of maximal expiratory flow rate.

valve, some corrugated tubing and a gas meter (total cost approximately $130). (Fig. 7).

The maximal voluntary ventilation is collected over a 12-second period with this apparatus and the volume forced through the gas meter. The volume multiplied by five will give the maximal breathing capacity. This same equipment may be used in measuring the resting and exercise ventilation described below.

A Benedict Roth Spirometer may be used for measuring the MBC and the timed vital capacity. It is an expensive piece of equipment, however, and not portable.

The timed vital capacity, or forced expiratory capacity (FEC), is reported as the percentage of the total vital capacity expired in a given time (0.5, 1.0, 2.0, 3.0 seconds). The two and three-second measurements are used less often than the others. The FEC correlates well with the maximal breathing capacity, and factors for converting FEC to an indirect MBC are available.

The *Maximal Mid-Expiratory Flow Rate (MMEF)*[9] is a measure of the mid-third, or fast part, of the vital capacity curve. If a spirometer is available, the FEC and the MMEF are both excellent measures of expiratory flow. In both instances the calculations take time, the equipment is expensive, and it is not truly portable.

The *Maximal Expiratory Flow Rate (MEF)* as measured by the Puffmeter (cost $60)[10] (Fig. 8), or the Wright Peak Flow Meter (cost $125),[11] are more useful office tests. The flow is damped as measured by the Puffmeter, which is a distinct advantage in detecting obstructive airway disease. The peak flow is not measured but rather the flow that can be maintained over a very short period of time. The MEF, as measured by the Puffmeter, correlates well with the MBC, (Fig. 9). Because of the damped characteristics of this

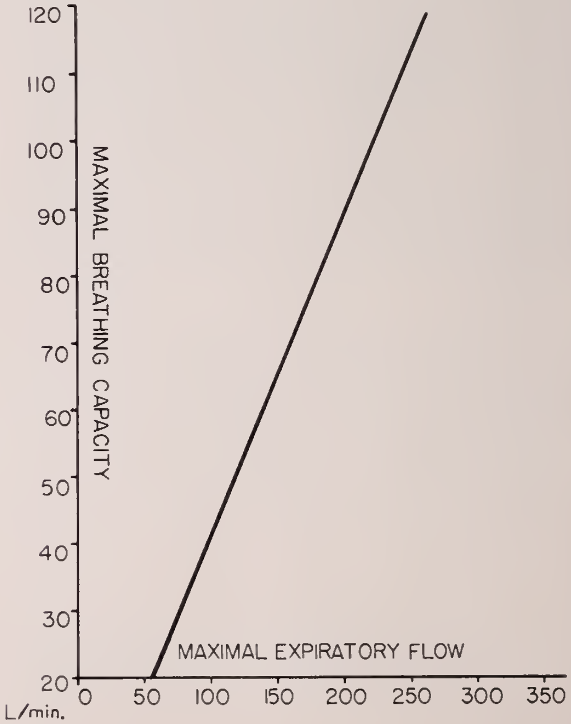

Fig. 9. Relationship between maximal expiratory flow rate and maximal breathing capacity.

meter, however, patients with expiratory volumes less than two liters will not be able to maintain a high flow rate for a long enough interval to give a normal value.

The Wright Peak Flow Meter has been used extensively in England for epidemiologic studies, and it correlates well with the MBC.

Peak flow measurement, maximal expiratory flow, forced expiratory capacity, and the maximal mid-expiratory flow correlate well with the maximal breathing capacity. This relationship provides a valuable means for detection of malingering or lack of cooperation on the part of the patient. If two entirely different methods of testing flow rate produce values which cannot be correlated with each other, one of the above-mentioned factors should be suspected, unless the patient is seriously ill and disabled, or for some other reason is unable to perform one of the tests. Some patients fail to understand the principle of the maximal breathing capacity and simply cannot perform rapid oscillations of the respiratory apparatus.

Some measures of expiratory flow are affected by inadequate volumes. When the vital capacity is low and the flow rates are abnormal, one is faced with the dilemma of deciding whether obstructive disease or restrictive disease is present, or if there may be some combination of the two. A useful ratio in this regard is the air velocity index of Gaensler, relating the per cent predicted MBC to the per cent predicted vital capacity.[12] Values below 0.8 are indicative of obstruction and those above 1.2 suggest restrictive disease. Absolute values must be considered and both the vital capacity and MBC may be abnormal with the ratio of the two being within normal limits. A combined defect, both restrictive and obstructive, is then suspected.

walking ventilation

Ventilation during exercise, when compared with the maximal breathing capacity, is the best objective measurement of pulmonary disability or dyspnea that we have. Warring[13] described the *Walking Ventilation Index (WVI)* as the ratio of ventilation per minute while walking at two miles an hour, on the level, for four minutes (with gas collection over the last three minutes) to the maximal breathing capacity. The use of more than 35 per cent of the MBC while walking at this rate usually results in dyspnea. If 35 to 45 per cent of the MBC is used in this walk, mild dyspnea occurs. If 45 to 55 per cent is used, moderate dyspnea is present, and ventilation of more than 55 per cent of MBC results in severe dyspnea.

This evaluation is dependably accurate in DOPS. It is somewhat less reliable in those people with minimal restrictive pulmonary disease from fibrosis or in those with membrane permeability defects. Such individuals will hyperventilate and use 40 per cent or more of the MBC and still not complain of dyspnea. If there are chest x-ray changes suggesting fibrosis, the findings of reduced lung volume and increased exercise ventilation should lead one to suspect a permeability defect.

The walking ventilation index may be measured with the Darex bag equipment already described. One hundred and eighty feet is marked out in a corridor, and the patient walks this distance each minute for four minutes, with the expired gas being collected for the last three minutes of that interval. It is essential that the patient and an observer record their evaluation of the amount of dyspnea the patient suffers as a result of the walk. Discrepancy between observer, subject, and the WVI are enlightening as to the nature of the dyspnea and further evaluation of the function problem.

interpreting results of tests

There are several rules of thumb that may be used in inferring abnormalities involving one or more of the other three levels of function from findings of tests at the ventilation level. These inferences should be checked by direct measurement, but they provide a guide in determining the necessity for further studies.

In DOPS or emphysema the primary abnormality is airway obstruction. Ventilation-perfusion abnormalities often develop secondarily. Patients with mild DOPS (MEF greater than 160 liters per minute) seldom have hypoxia. Yet 50 per cent of patients with an MEF below 110 liters per minute (Puffmeter) will have hypoxia. With this degree of obstructive airway disease, about 15 per cent will also have hypercarbia. Here venous CO_2 determinations may be useful in conjunction with the flow rate studies. If his MEF is below 110 liters per minute and his CO_2 content above 30 mEq/liter, the patient with emphysema has probably deteriorated past the stage of hypoxia to combined hypoxia and hypercarbia, and respiratory acidosis may be present. This may be confirmed by doing an arterial puncture to determine the pH, partial pressure of CO_2 and O_2 saturation of the arterial blood.

If the vital capacity is low, the MEF is normal, the chest x-ray shows pulmonary fibrosis, the venous CO_2 is decreased, and the patient hyperventilates at rest and with exercise, diseases producing membrane permeability defects should be considered. Arterial blood gas studies will indicate a drop in O_2 saturation with exercise if the membrane defect is severe. (Measurement of carbon monoxide diffusion capacity will detect lesser defects and add confirmatory evidence to blood gas findings in severe ones.)

presurgical evaluation

In the evaluation of candidates for chest surgery the following general rules should be kept in mind: (1) If the surgery contemplated involves but one lung, and there is no evident disease in the opposite lung, the finding of normal expiratory flow rates and volumes makes further study unnecessary in most cases. (2) The patient who now has, or has had, marked disease (pleural, vascular, parenchymal, or skeletal) in the hemithorax opposite to that of the planned surgery, should have bronchospirometry performed. (3) For the patient on whom surgery of one lung is contemplated (whether or not disease is present in the opposite lung), who has abnormal expiratory flow or volumes, further considerations must be made. The operative loss must be calculated and limits of functional loss tolerable in each patient established.

For the most part vital capacity may not be cut below 1500 milliliters or the MBC below 50 liters (MEF 140 liters, plus or minus) without consideration of the probability that the patient will be dyspneic following surgery, and that his operative risk will be higher than normal. Pulmonary functional abnormalities are most severe immediately following surgery, and improvement will occur throughout at least the first three postoperative months.

As a general rule one should allow a five per cent loss of total vital capacity and MBC for each segment of lung to be resected. If estimated postoperative vital capacity and MBC are likely to be at danger levels, other studies, particularly bronchospirometry, should be considered in the preoperative evaluation.

summary

Tools for volume and flow measurements can be included in a diagnostic kit and be available to the physician, whether in the office, the home or the hospital. These are simple procedures which will find many more clinical abnormalities than will the sphygmomanometer. They will provide an evaluation of obstructive airway disease and its deterioration and make its treatment possible at a stage when it may still be reversible. From simple measurements of function at the ventilatory level, the physician can infer the presence of ventilation-perfusion or permeability abnormalities.

These simple diagnostic methods add immeasurably to the total care of patients, and they require an expenditure for office equipment which need not exceed $300. It might be considerably less. In fact, valuable information can be obtained with a polyethylene bag, a two-gallon jug, and a book of paper matches. ■

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Family Physician Cooperation with School Health Programs

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Increased interest in cooperation between family physicians and schools has been evident recently, in the literature, and in the activities of physicians. Representative of this was the report of the Committee on School Health of the American Academy of Pediatrics in 1959, which stated in part:

> School Health is but a part of an overall planning for child health which begins (in) . . . prenatal life and continues through the school years. The private physician surrenders none of his responsibility for the child's health when the child enters school. Instead, the school joins him and the parent as a third party interested in the child's health . . .
>
> The private physician, who has been the medical advisor to the child during his preschool years, should play an important role in this cooperative activity of adjusting the child to the school environment. Not only should the child enter school in optimal health, but he should continue in optimal health throughout his school years. His good health is basically his parents' responsibility. The parents can be helped where and when necessary by a properly organized "health program for school age children."[1]

Because of this interest in improved cooperation, and because of problems which will be discussed later in this paper, medical organizations in Washington have initiated meetings with representatives of local school districts and the Washington State Department of Public Instruction. We have been among those representing the Washington State Medical Association, the Washington State Society of Pediatrics, the King County Medical Society and the Seattle Pediatric Society. However, this is in no way an official committee report or resolution adopted by any of these societies.

The areas of present concern, recognized in part two years ago by a resolution of the Trustees of the King County Medical Society, are as follows:

> Health education of the students.
>
> Control and prevention of communicable diseases in the school age population.
>
> Correlating the child's health with his learning and education.
>
> Physical examinations for athletes and other school age children.[2]

to which we would now add:

> Roles of family physician and school personnel in mental health problems.
>
> Recognition of the need for qualified medical personnel on the school staff.

health education

Physicians have an opportunity to advise schools on content of the health education curriculum. This can be done first, through liaison with the state officials concerned with public instruction, in the development of curriculum guides, and second, by concerning themselves with course content in local school districts.

One suggestion, on the local level, has been for physicians to meet with teachers and physical education instructors for their in-service training. Another is for physician participation in science clubs or student seminars.

We are obliged to help educate the child to build good health; to resist the Madison Avenue blandishments for patent, useless medicines; to know quackery for what it is. Physicians should urge lifelong attention to physical fitness for all, not just those who are athletically gifted.

communicable disease control

The program of immunizations conducted in the schools, designed to reach those children who fail to get them from a physician, has been a generally successful undertaking. It must of necessity be sensitive to the monies made available by our political bodies. For this reason, physicians should scrutinize the program to insure that it follows sound medical practice.

Record of immunizations given each year should be provided to parents and to the family physician. School or health department records are unavailable much of the time. It is frustrating to attempt to care for a patient during the hours

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that the school is closed, when it is important to know when the child had his last tetanus booster.

correlation of health and learning

The avenue of communication between physician and school should be a two-way street. The commendable, in school programs of screening for deficiencies in hearing and vision should be encouraged. Reports of deficiency should be sent promptly to the family physician for his disposition. Similarly, any other medical problem observed by an experienced teacher or school nurse should be checked against the medical report submitted by the physician, and brought to attention of parent and physician where necessary.

Periodic reports by the physician to the school are highly desirable, particularly when used by a team including teacher, principal, school physician and curriculum director to tailor the education program to the limitations of a handicapped child.

The handicap may be visual, auditory, cardiac, orthopedic, neurologic, intellectual or emotional. These problems are medical and medical advice is essential.

This is not to claim that the doctor is qualified to judge matters of curriculum content; rather he contributes *medical* information by describing the child's stamina, need for special facilities, attention span, and ability to get along in groups. In cerebral palsied children he can point out those areas in which children with neurological problems characteristically do poorly. In cooperation with the psychologist he can help categorize and place properly a "slow" or retarded child.

He can also advise his community of the need for special facilities needed to educate the significant numbers of handicapped children who need them.

the periodic health inventory

We recommend a periodic health inventory for each child. A report should be forwarded, with the parents' approval, to the school. This includes a history, taken with a parent present, and complete physical examination. It includes the usual blood and urine screening tests and booster immunizations when needed. Preferably the examination should be an annual event. As a minimum standard, the inventory and report should be done on entry into kindergarten or first grade, and before starting the fourth, seventh and tenth grades.

Some parents, we know, are not convinced of the need for periodic well-child visits, some object on religious grounds, and some cannot afford it. We can hope to reach the first two groups with an information campaign such as those mounted by the heart or cancer societies. It is on the conscience of the community, medical and nonmedical, that some families cannot afford needed medical care, and the solution is not within the scope of this paper.

The athlete has been singled out for special attention because of the vigor of his activities, and perhaps because of an unspoken fear of medico-legal complications following athletic injury. In a number of school districts physical screening is done in the school building by paid or volunteer physicians. Officers of medical societies have strongly objected. We feel the physician's office is the place for an examination. A parent should be present for the history, and the laboratory should be utilized. We can see no difference between the medical needs of the athlete and the nonathlete; indeed the regular physical education program may present hazards to the child who does not turn out for sports.

One unfortunate result of gymnasium screening physicals and school immunization programs is that the child and parent are taught a low standard of medical care, destructive to the traditional patient-doctor relationship and in marked contrast to the standard we are capable of offering in this country. *This to us is poor health education.*

roles of family physician and school personnel in mental health problems

It is generally accepted, by both school personnel and physicians, that the child with clear-cut physical problems should not be treated by the school. *There is no such clear understanding regarding emotional problems.* Teachers are often frustrated by the child who, because of emotional problems, does not make satisfactory progress. For this reason there has been an increasing tendency to hire individuals who are tending more and more to diagnose and even to provide treatment for emotional problems. The relatively new field of *guidance* is having growing pains. We see a burgeoning of the number of school social workers, psychologists, guidance counsellors, and even school psychiatrists.

The family physician must be willing to assume the same responsibility for a child's mental health as for his physical health. He should first review the physical status to insure that undetected disease is not the cause of the behavorial problem. A large number of "emotional" problems are resolved in this way.

The physician should evaluate the child on the bases of his own professional knowledge, his knowledge of the family, and information from the school. He should obtain any consultation that may seem indicated. If he feels the child should be referred for treatment, it is his responsibility to refer the child to that resource best equipped to handle the problem.

For the physician to fail to assume responsibility for the total health of the child is to push the school further toward providing services inappropriate for an educational institution and incompatible with our ideas of the physician's responsibilities.

Often, after a physician's advice is sought regarding such problems, he indicates that he is not interested in handling them. We feel this is a serious mistake. At least, he could rule out physical causes, and assume responsibility for referral to a competent consultant. It must be understood that the school personnel have complete or almost complete lack of medical background. They are not able to evaluate a child fully. They are unable to understand the interrelationship of physical and emotional problems.

This is not to deny the competence of school personnel in selecting a curriculum for a given child, of administering achievement and aptitude tests and counselling the child and parents appropriately; nor of the psychologist in using the psychometric test to place the child in appropriate and profitable grouping, or to rule out an intellectual handicap as a cause for poor performance. These are proper educational functions which physicians should not arrogate to themselves.

Physicians do, however, have a clear professional role in the responsibility for the mental health of the school age child. Neither they nor the parents can surrender it to the school.

This responsibility extends to educating the community to the need for new psychiatric clinics outside the school system, where such facilities are limited, and when children cannot afford private care.

need for qualified physicians on the school staff

There must be increasing recognition of the need for medical personnel on school staffs and there must be more active support for such employment. Local physicians must make school administrators aware that it is necessary and desirable. There are increasing numbers of psychologists, social workers and other paramedical persons employed by school districts, but very few physicians. To illustrate, the Guidance Department of Seattle Public Schools employs 22 social workers, 16 psychologists, 3 coordinators, 4 home visitors and one consultant; the Medical Department lists 54 nurses, but only one physician for the entire system.

It is important that a physician be available as a consultant to school personnel and be able to participate in formation of policies having to do with matters of child health. The schools either have no physician on staff, or so overload those who might be available, that medical advice is not utilized in arriving at policy decisions. It is for this reason that we have seen the emergence of policies not reflecting medical thinking. Improvement cannot be achieved through use of the private practitioner as he does not have the time to sit with an executive group, nor can he be available at other crucial times when medical representation is necessary. Also, a physician who is a member of the school staff is in a position comparable to that of any of the multitude of paramedical people in the school system. Even if a private practitioner could serve, he probably would not have the training and experience needed to do the most effective job, working in a school setting.

Increased medical time for the schools will not come about unless the medical community makes its views known on this subject to school administrators and to school boards. It would seem that this must be one of the first objectives of medicine if we are to begin to improve the unsatisfactory situation existing today.

conclusions

We have outlined six areas of cooperation between private physicians and schools. These are: health education, communicable disease control, enabling the handicapped child to learn optimally, encouraging a periodic, comprehensive history and physical examination for all children, athletes or not, making proper investigation of behavorial problems, and encouraging the employment of physicians to handle medical policy matters in the schools.

We must recognize that to provide comprehensive care for children in the school age group, physicians must be trained according to modern concepts. As well as competence in the management of the traditional diseases of childhood, physicians ought to have a knowledge of neurological problems, including mental retardation, of emotional growth and development and of pediatric psychiatric problems.

The rather marked revision of the pediatric curricula in medical schools, and the demands increasingly placed on physicians by young patients, by society and the schools, are signs that emphasis must change. This is a challenge to practicing physicians to modernize their professional competence to meet the changing scope of the practice of medicine.

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Respiratory Obstruction

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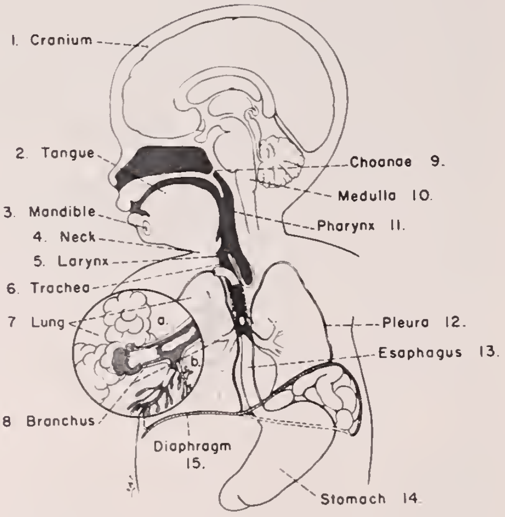
Fig. 1

INTERFERENCE WITH RESPIRATION IN THE NEWBORN, SITES AND LESIONS



1. CRANIUM: birth trauma, hemorrhage, hypoxia, maternal sedation, kernicterus, anomalies.
2. TONGUE: glossoptosis.
3. MANDIBLE: hypoplasia of mandible.
4. NECK: cystic hygroma, thyroglossal duct cyst.
5. LARYNX: atresia, web, laryngomalacia, cord paresis, cyst, papilloma, and other tumors, laryngeal and subglottic edema, subglottic stenosis, foreign body, breath holding.
6. TRACHEA: tracheomalacia with or without vascular ring, tracheo-esophageal fistula, stenosis of trachea following fistula repair. Tracheostomy cannula plugged, misfit, in false passage, chin flexed over cannula.
7. LUNG: primary and secondary atelectasis. Lobar emphysema (a). Pneumonia, acute pulmonary edema, abscess, cyst, obstructive atelectasis (b). Hyaline membrane atelectasis.
8. BRONCHUS: bronchomalacia, agenesis, web, stenosis, foreign body, meconium, milk, vomitus, blood.
9. CHOANAE: bilateral atresia.
10. MEDULLA: depression of respiratory center by drugs, infections.
11. PHARYNX: foreign body.
12. PLEURA: effusion, pneumothorax.
13. ESOPHAGUS: foreign body, tracheo-esophageal fistula.
14. STOMACH: massive distension.
15. DIAPHRAGM: hiatus hernia, phrenic nerve paresis, high diaphragm from meconium peritonitis.

It is the duty of every physician to familiarize himself with the fundamental principles involved in the rapid diagnosis and early treatment of respiratory obstruction.

Airway emergencies are among the most frightening conditions a physician is called upon to treat. Hardly a week goes by without a newspaper reporting such headlines as, *Infant suffocates in crib, Baby chokes on candy, Child strangles on milk, Bathroom steam suffocates child, Girl strangles in swimming pool,* or *Diner chokes on meat.* Safar estimates that over 20,000 deaths due to asphyxia occur in the United States each year.[1]

importance of respiratory obstruction

Red Cross data, and those from other sources, show that if resuscitation is begun within one minute after breathing stops, 98 per cent will survive. As the interval becomes longer the survival rate decreases as shown in table 1. After 8 minutes of apnea, or 4 minutes of cardiac arrest, severe brain damage and irreversible central nervous system changes occur.[2] Experience has shown that in the newborn and infant the time of apnea is even more critical than in the adult.

Table 1

Resuscitation delay and survival rates

delay in minutes	survival rate, per cent
1	98
2	92
3	72
4	50
5	25

audible signs

Airway obstruction may be congenital or acquired. It may be intrinsic or extrinsic, and it may occur anywhere from the nose to the pulmonary alveoli. Lesions at or above the level of the larynx cause an inspiratory stridor or wheeze. Lesions below the larynx cause an expiratory wheeze (see figure 2). Lesions in the trachea may cause both inspiratory and expiratory wheezing. There is no noise in complete obstruction of the larynx or trachea.

steps in resuscitation

1. Place patient in supine position.
2. Clear the airway by turning head to one side. Force the mouth open and wipe out foreign matter, using middle finger of one hand, or catheter with portable aspirator (foot-operated Ambu Suction Pump[*]) or motor driven suction pump.

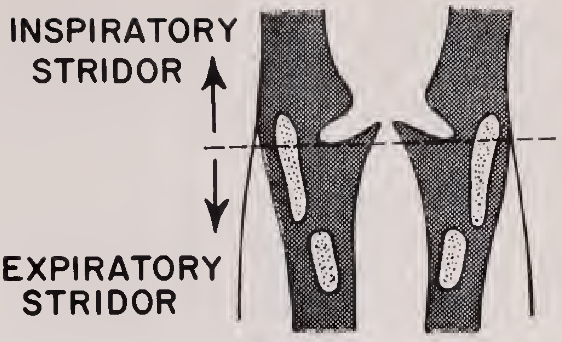


Fig. 2. Coronal section through larynx.

3. Maintain the airway by means of regular oropharyngeal airway (Guedel, Waters, or Berman plastic); or better, use an S-shaped or double airway which permits mouth-to-mouth resuscitation. (The best available are Mira Resuscitating Tube[†], Hudson Lifesaver Tube[‡], and Resusitube[§]). These tubes are made in assorted sizes, and a set should be in every physician's bag.
4. Tilt the patient's head back in hyperextension, and advance the jaw forward as in the "sniffing position,"[3-5] This lifts the tongue forward and increases the airway, as shown in figure 3.

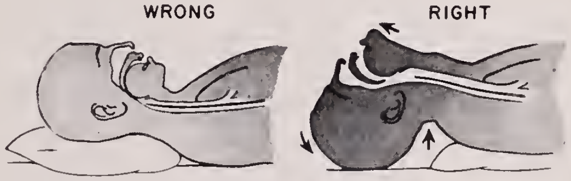


Fig. 3. Position for resuscitation.

5. "Blow air into the lungs as soon as you see a non-breathing victim."[6] Forceful insufflation of exhaled air or oxygen may be administered by mouth-to-mouth, mouth-to-nose, or mouth-to-airway method. This should be the first step in

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[*] Ambu Suction Pump and Ambu Resuscitator with Ruben non-rebreathing valve is manufactured by Air-Shields, Inc., Hatboro, Pa.

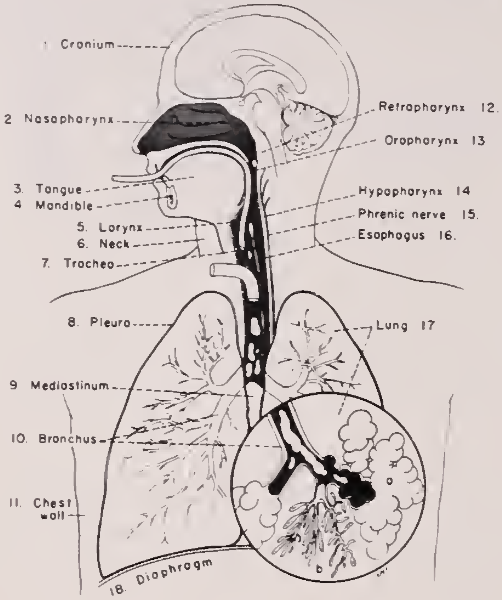
[†] Mira Resuscitating Tube is manufactured by The Mira Corp., 2656 N. Pasadena Ave., Los Angeles 31, Calif.

[‡] Hudson Lifesaver Tube is manufactured by the Hudson Oxygen Therapy Sales Co., 2801 Hyperion Ave., Los Angeles 27, Calif.

[§] Resusitube is manufactured by Johnson & Johnson, New Brunswick, N.J.

Fig. 4

INTERFERENCE WITH RESPIRATION IN CHILDREN AND ADULTS, SITES AND LESIONS



1. CRANIUM: depression in consciousness, cerebro-vascular accident, trauma, space occupying lesion, intoxications, post-convulsive state, encephalitis, meningitis, systemic infections, high fever. DISTURBANCES IN NEUROMUSCULAR CONTROL OF RESPIRATION: poliomyelitis, botulism, tetanus, Guillain-Barre′ syndrome, myasthenia gravis, cervical spinal cord injuries.
2. NASOPHARYNX: tumor, stenosis.
3. TONGUE: tumor.
4. MANDIBLE: fractured jaw.
5. LARYNX: acute epiglottitis, acute laryngo-tracheitis, diphtheria, edema, hemorhage, external trauma with fracture, laryngocele, tumor, recurrent laryngeal nerve paresis, laryngospasm, foreign matter, mucous, blood, water, caustics, vomitus, gases, chlorine, smoke, powder, anesthetics, painful stimuli, flash burns from explosions, anaphylaxis with edema, hysteria.
6. NECK: diffuse inflammation, deep infection, abscess, cystic hygroma, thyroglossal duct cyst, tumor.
7. TRACHEA: foreign body, tumor, rupture, cast, membrane, burn from smoke or chemicals, post-laryngectomy atrophic tracheitis. Tracheostomy cannula: plugged, misfit, too long, in false passage, tracheal granuloma. Endotracheal catheter: plugged, kinked, misplaced, too long (with resulting edema and granuloma).
8. PLEURA: effusion, pneumothorax, empyema.
9. MEDIASTINUM: tumor, emphysema, rupture of vascular aneurysm.
10. BRONCHUS: tumor, hemorrhage, foreign body, status asthmaticus.
11. CHEST WALL: crushing injuries with fractured ribs.
12. RETROPHARYNX: abcess.
13. OROPHARYNX: peritonsillar abscess, foreign body.
14. HYPOPHARYNX: tumor, chemical burn, foreign body, external trauma.
15. PHRENIC NERVE: paresis.
16. ESOPHAGUS: tumor, foreign body, perforation with air leak.
17. LUNG: obstructive emphysema (a), obstructive atelectasis (b), pneumonia, tumor, lobectomy, pneumonectomy.
18. DIAPHRAGM: hiatus hernia.

combatting respiratory obstruction. As soon as available, a bag and mask may be substituted, using air or oxygen. The Pulmonator[1] or Ambu Resuscitator* (with Ruben non-rebreathing valve) are highly recommended for immediate use when an oxygen cylinder is not available. These bags are self-filling with atmospheric air; but oxygen can be added. The bag-mask-oxygen unit is best used by an expert. One should observe the chest movements closely when using intermittant-positive-pressure-breathing.

6. Intubate the trachea after doing the preceding steps. An endotracheal tube may be inserted with the aid of a laryngoscope. If oxygen is not available, mouth-to-tube insufflation may be administered. A Mosher life-saving tube is occasionally helpful. A bronchoscope may be passed, at which time the tracheo-bronchial tree may be aspirated thoroughly and oxygen can be supplied through the side arm.

7. Tracheostomy. This should be performed only in a hospital. The third interspace is preferable; but the first may be used in an emergency. In rare cases a 15 gauge needle may be inserted through the crico-thyroid membrane, and oxygen (or air) blown into the trachea. One must not blow air into the mediastinum! If massive mediastinal emphysema or tension pneumothorax results from traumatic injuries to the larynx, pharynx, trachea, esophagus or chest, an immediate tracheo-mediastinotomy should be performed.[7]

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[1] Pulmonator manufactured by Western Anaesthesia Equipment Co., Inc., 2553 Middlefield Road, Redwood City, Calif.

8. Crico-thyrotomy. This is useful in an extreme emergency as a temporary measure. It is unsuitable for infants and small children. Entrance through the crico-thyroid membrane may be obtained by a scalpel (or pocket knife), or by the emergency airway set¶ developed at the University of Kansas Medical Center. It consists of dagger scissors, bivalve cannula, and retractors.

9. Reestablish cardiac action by external massage.[8] *This should be used only in conjunction with artificial ventilation.*

10. The Trendelenburg position is most important when pharyngeal pooling of mucus occurs, as in cases of bulbar paralysis or crushing chest injuries. To prevent aspiration of blood following a tonsillo-adenoidectomy the patient should be placed in the prone position, head low, with face turned to one side.

11. Drugs. Narcotics and analgesics should be avoided. Succinylcholine (Anectine) is valuable for relaxing laryngospasm; but should not be used without a positive pressure breathing bag. Bronchodilators, e.g. epinephrine, isoproterenol (Isuprel), and corticosteroids are useful in acute allergic reactions of the larynx, trachea, and bronchi. Antihistamines and other mucous membrane drying agents are contraindicated.

conclusions

Resuscitation of a non-breathing patient should be started immediately, regardless of the cause. The steps in order of importance include:

1. Prompt establishment and maintenance of a clear airway. This is of extreme importance in a patient with depression in consciousness. Plum said: "In acute head injuries, if you worry more about the airway and less about the head, more brains will be saved."[9]
2. Determination of the point of obstruction.
3. Removal of the obstruction (i.e. foreign body, tumor, web).
4. Correction of disease causing extrinsic pressure (i.e. tumor, abscess, hiatus hernia, pleural effusion, pneumothorax, mediastinal emphysema, cardiovascular anomalies).
5. Circumvention of the obstruction by tracheostomy. This may be a life-saving procedure in open heart surgery when respiratory distress develops.
6. Decreasing edema and spasm of the larynx, trachea and bronchi with sympathomimetic drugs. ■

432 Stimson Building (1)

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¶ Emergency Airway Set manufactured by Storz Instrument Co., 4570 Audubon Ave., St. Louis 10, Mo.

Private industry has donated more than $425,000 to the AMA-ERF Student Loan Fund. This support, together with generous contributions from physicians, has made it possible for thousands of medical students, interns and residents to obtain low-interest bank loans to help finance their medical education.

Electromyographic Diagnosis of Impaired Ulnar Nerve Function

JOHN B. REDFORD, M.D. Seattle, Washington

In recent years there has been much interest in the use of electromyography for the diagnosis of various neuromuscular conditions. Needle electrode examinations have been performed for over a decade but it is only in the past four or five years that studies have been made of electromyographic responses during nerve stimulation.

Examination of the muscle using only needle electrodes will not distinguish whether a disease process is affecting the anterior horn cell, nerve root, the main part of the peripheral nerve or its terminal branches. This is because fibrillation potentials at rest may occur in skeletal muscle in any of the above conditions. One way to distinguish between these conditions is to detect segments of altered excitability along the axon by use of nerve stimulation.

Electronic stimulators coupled with EMG apparatus have made such determinations relatively simple. The current method of recording using a camera and oscilloscope was developed by Hodes and his associates in 1948.[1] They placed recording electrodes over the belly and tendon of the muscle to be studied, then stimulated the nerve percutaneously at various points along its course.

Conduction velocity of motor fibers is reduced in conditions affecting the axon primarily. On the other hand, in conditions affecting the anterior horn cell, conduction velocity is usually normal or only slightly reduced.[2]

This paper is a report on three years of experience using nerve stimulation as an adjunct to needle electrode examination in the differential diagnosis of conditions affecting the motor fibers of the ulnar nerve.

conduction velocity

Conduction velocity of normal human motor nerves varies from 40 to 70 meters per second (M/sec). It is directly proportional to the diameter of the nerve fibers and to the temperature of the nerve, but inversely proportional to the age of the subject after the age of three years. Conduction velocity in the fibers of the ulnar nerve in the forearm supplying the hypothenar muscles in normal adults ranges between 45 and 70 M/sec.[3-5] For determining conduction velocity in these fibers the usual procedure is to stimulate the ulnar nerve at the elbow and wrist with a recording electrode over the hypothenar muscle. After a photograph is taken of the responses on an oscilloscope screen, a measurement is made of conduction time which is the time from stim-

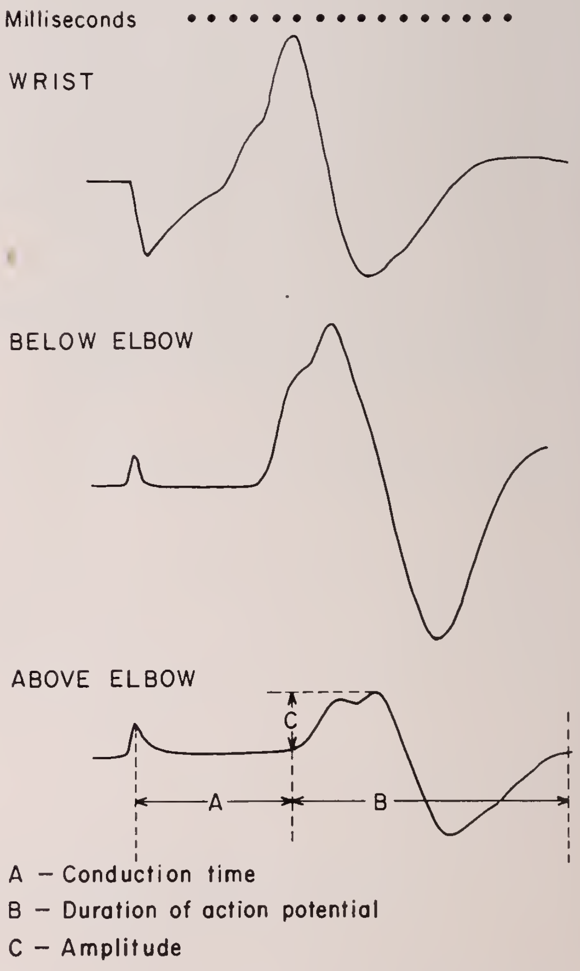

Figure 1 Recordings from the hypothenar muscle in a patient with a block in nerve conduction at the elbow. The lowest response in the figure is a result of stimulation above the elbow and is lower in amplitude than the other two responses. It also illustrates measurement of muscle action potentials.

From the Department of Physical Medicine and Rehabilitation, School of Medicine, University of Washington.

ulus artifact to the onset of the electrical response from the muscles (figure 1). To calculate conduction velocity, the distance in meters between points of stimulation is divided by the remainder after subtraction of conduction time of wrist stimulus from conduction time from elbow stimulus measured in seconds. A complete description of this technique may be found in a previous report.[6]

When conduction velocity is studied in this manner, information derived about the nerve applies only to the segment between the stimulus at the elbow and the stimulus at the wrist. Therefore, lesions distal to the wrist may not affect data from this segment of the nerve. In such a case a conduction time measurement from the point of stimulation on the wrist or on the elbow to the recording electrode on the hypothenar muscle, or to the first dorsal interosseus muscle, might provide more useful information. Conduction time and conduction velocity mainly give information about the fastest conducting fibers. If there are some normal fibers as well as some slowly conducting fibers, these measurements may be within normal limits.

Another way to determine reduced conduction velocity is to measure the total duration of the composite potential produced by nerve stimulation. This potential is a result of the chronographic summation of the impulses travelling at slightly different rates along individual motor nerve fibers. The composite potential recorded is derived from impulses conducted at slightly different rates. If its duration is abnormally long, when compared with responses in normal persons, presumably some of the motor nerve fibers are conducting more slowly than normal.

In this study I tried to determine which of the three above mentioned parameters was the most reliable guide in the differential diagnosis of ulnar nerve lesions: conduction velocity, conduction time, or duration of action potential.

method

The method used was similar to that described by Hodes.[1] Recording electrodes were tin alloy cups (8 mm in diameter) placed over the end plate zone and the insertion of the abductor digitiquinti muscle. Some recordings were made from the first dorsal interosseus muscle as well as the abductor digitiquinti. The stimulus was applied by two rounded electrodes held firmly over the ulnar nerve at the wrist and at the elbow. Distances were measured by applying steel tape closely over the skin between the point of stimulation and the recording electrodes. Responses were photographed with a Polaroid camera. In all cases conduction time and conduction velocity were calculated. In most cases total duration and amplitude of action potential derived from nerve stimulation at elbow were measured. Nerve conduction of the ulnar nerve on the affected arm was always compared with that on the contra-lateral arm.

Subjects were patients referred for electrodiagnostic evaluation to the University Hospital. About two-thirds of the subjects were men and they ranged in age from 16 to 85. In this study there were twenty subjects with no clinical or other evidence of neurologic disease in the arm that was examined, twenty-four subjects with lesions of the lower brachial plexus or lowest cervical nerve roots, and sixteen subjects with ulnar palsy. All cases of ulnar palsy had unilateral lesions with one exception. I excluded patients with other neurologic disturbances, such as polyneuritis, amyotrophic lateral sclerosis and carpal tunnel syndrome. All cases had needle electromyographic studies in addition to nerve stimulation. The diagnosis of root or plexus lesion was made when there was a history of trauma to the plexus or roots or there was x-ray evidence of cervical spondylosis with relief of symptoms by conservative or surgical means. The diagnosis of ulnar palsy was made in almost all instances on the basis of trauma to the ulnar nerve with typical sensory and motor loss in the hand and forearm. Nine of the sixteen cases had surgical relief of pressure on the ulnar nerve.

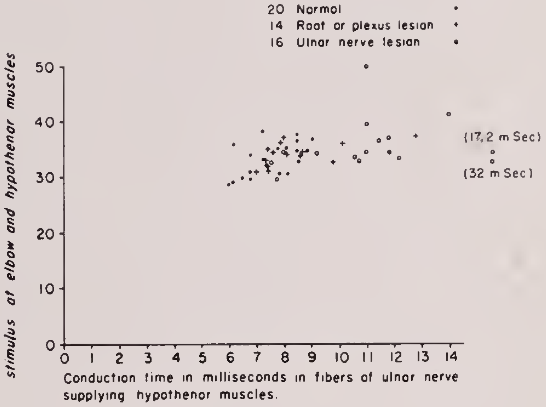

Figure 2

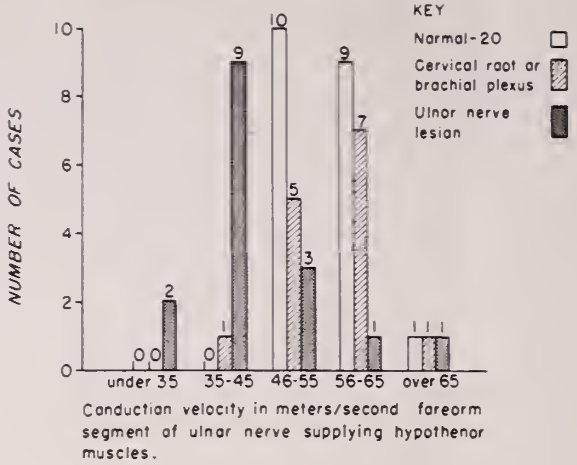

Figure 3

results

Figure 2 shows conduction time from the point of stimulation on elbow to hand on the abscissa with conduction distance on the ordinate. Normal values range between 6.0 and 9.0 milliseconds (average = 7.6), values in nerve root lesions are between 7.1 and 12.8 m sec (average = 8.4), and values for ulnar palsy range from 7.5 to 32 m sec (average = 12.3).

In figure 3, conduction velocity measurements are shown in the form of a bar graph. Normal values ranged from 47 to 75 M/sec (average = 53.3). Values for root or plexus lesions ranged from 37 – 69 M/sec (average = 55.5), and those for ulnar nerve lesions ranged from 27 to 68 M/sec (average = 42.5).

In figure 4, durations of potentials recorded when the ulnar nerve was stimulated at the elbow are presented in the form of a bar graph. Normal values ranged from 8 to 19 m sec (average = 12.1). Values for root or plexus lesions ranged from 10 to 21 m sec (average = 12.7) and values for ulnar palsy ranged from 11 to 23 m sec (average = 16.5). There are fewer cases recorded here because of technical difficulties in evaluating some of the older recordings.

When needle electrode examinations were performed, all patients with root or plexus lesions who had denervation in muscles supplied by the ulnar nerve had, in addition, denervation in other muscles of the arm. All patients with ulnar palsy had denervation exclusively in the distribution of the ulnar nerve. However, in two cases there was denervation in none of the muscles, diagnosis resting primarily on clinical findings.

comment

It is apparent that in patients with ulnar palsy, conduction time between elbow stimulus and recording electrode is prolonged and conduction velocity is slower than in normal subjects and in patients with brachial plexus or root lesions. My average value of 53.3 M/sec for conduction velocity in normal subjects is slightly lower than that reported in other series such as Johnson and Olsen[3] whose average value was 55.1 M/sec. This may be due to the small sample, or it is possibly due to the selection of subjects, as all of them were referred for electrodiagnostic exam and some may have had subclinical changes in nerve function.

Five patients with ulnar palsy fall into the range of normal values for conduction velocity of 45-70 M/sec. Three of these patients with ulnar palsy also had conduction times from elbow stimulus of less than 10 m sec and so appear to fall within the limits of normal. These three cases deserve some discussion.

The first of these patients was a 37 year old housewife who injured the ulnar nerve in her hand by a hard blow to the hypothenar eminence against a television set. A nerve stimulation study showed slowing in fibers distal to the wrist supplying the first dorsal interosseus muscle but no slowing of conduction velocity in these fibers above the wrist or in fibers to the hypothenar muscles. Subsequent surgery released compression of the ulnar nerve in the hand, relieved her symptoms, and restored EMG pattern to normal.

The second patient was seen four weeks following trauma to the ulnar nerve at the elbow

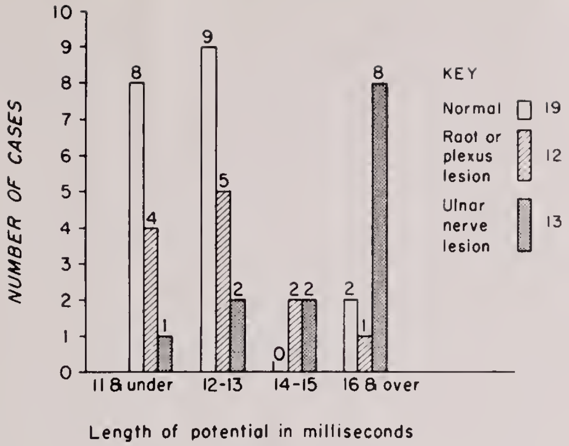

Figure 4

with an indisputable clinical picture of ulnar palsy. Although the length of the action potential (17 m sec) appears prolonged when compared with most normals (average = 12.1) there was a duration of action potential of 16 m sec on the normal side. In spite of the fact that the needle EMG findings were compatible with ulnar palsy, presumably not enough time had elapsed for nerve conduction velocity to be altered.

The third patient was also seen about four weeks after onset of symptoms. In this case, although conduction time was 8 m sec and conduction velocity was 52 M/sec, there was a definite block of conduction behind the elbow. This was determined when the nerve was stimulated above and below the elbow and the response compared with the normal side. A block in conduction is demonstrated by a marked drop of amplitude of a response when stimulation above is compared with stimulation below a lesion.[3] These responses are shown in figure 1.

One case of ulnar palsy in a patient, (H.S), whose findings were equivocally normal (conduction time 9.2 m sec and conduction velocity 45 M/sec), had pain along his medial forearm following a previous ulnar nerve transplant but had no fibrillation or definite sensory loss in the hand. Re-exploration freed up some scarring around the nerve and relieved his symptoms.

An interesting case, not included in this series, was a 40 year old man who was studied in May 1961 because of parasthesias and sensory loss in an ulnar distribution in the right hand with a severe loss of strength in the hypothenar and interosseus muscles of the hand. He had previously had a successful ulnar nerve transplant at the elbow for left ulnar palsy. No response in the hypothenar or first dorsal interosseus muscles could be elicited when his ulnar nerve was stimulated above or below the right elbow. However, a good response was elicited from these muscles when the right median nerve was stimulated at the elbow. When the ulnar nerve was stimulated at the wrist a similar response to that seen from median nerve stimulation was obtained. By moving the electrode proximally along the forearm a point at which no response could be elicited from the ulnar nerve was found. Presumably there was a cross connection from the median nerve to the ulnar nerve just distal to this point. Thus the median nerve was the only motor nerve supply to the right hand. This was borne out by the results of a surgical transplant of the right ulnar nerve. The nerve was thickened and scarred and nine months later there was still no evidence of return of function in the right hand, suggesting that the ulnar nerve was damaged beyond recovery.

These cases bring out some pitfalls in using this technique for diagnosis of ulnar palsy. First there may be no changes in conduction velocity or conduction time in the forearm if the lesion is distal to the wrist. Fortunately such a lesion can be located by using a method described by Gilliatt in which responses from the hypothenar muscles and the first dorsal interosseus muscle are compared.[7] Secondly there may be no changes within the first four weeks in conduction velocity although information regarding a partial nerve block may be obtained. Thirdly, if there are only sensory changes, conduction studies of motor fibers may be equivocal as in patient H.S. In the presence of complete nerve blocks the findings may be confused by the presence of innervation of hypothenar and interosseus muscles by the median nerve. It is important in these cases to study the responses to median nerve stimulation as well as those to ulnar stimulation.

Duration of the action potential was generally more prolonged in ulnar nerve palsy than in the other two groups studied (figure 4). However, the normal variation is so great that reliance on this value alone appears to be unwise. For an adequate assessment of the situation, both conduction time and conduction velocity must be considered. As measurement of conduction velocity involves more sources of error than conduction time[5] the latter value may be more useful if used alone. However, whichever method is used other factors such as the time since injury or the possible location of the injury must be taken into consideration.

In root or plexus lesions, conduction time, conduction velocity and length of action potential were generally within normal limits except for one glaring exception (conduction time 12.8 m sec, CV=37 M/sec, duration of potential = 21 m sec). This patient was much improved following a cervical laminectomy and so presumably had a root lesion. Other authors have described root lesions as giving some slowing of conduction velocity. A new technique of stimulating the sensory nerves holds some promise of further separating root and ulnar nerve lesions. Sensory nerve potentials recorded from the ulnar nerve at the elbow when the fingers are stimulated are always altered in ulnar nerve lesions but not in cervical root compression.[7]

summary

In patients with cervical root or brachial plexus lesions, nerve conduction in the forearm and hand segment of the ulnar nerve is generally only slightly altered from normal. In patients with ulnar palsy, on the other hand, the findings differ significantly from normal. Values for conduction time are altered more frequently than those for conduction velocity or duration of action potential. Three cases of ulnar palsy where these values appeared normal were discussed.

Motor nerve conduction in the forearm may appear to be normal in ulnar palsy when there is: 1. a lesion distal to the wrist, 2. a time interval of four weeks or less from onset of symptoms, 3. absence of definite muscle involvement. Measurement of the duration of the action potential adds some information about nerve conduction velocity but is not reliable when used alone.

The measurement of nerve conduction appears to be a useful adjunct to clinical and needle electromyographic examination in differential diagnosis of a patient presenting with weakness in the small muscles of the hand and sensory loss over the ulnar side of the palm. ■

University Hospital (5)

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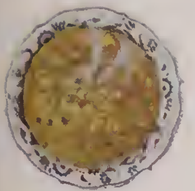
Hope you're not allergic to shellfish, Doctor



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BOOKS

RECEIVED: *The following books have been received. Publication of this acknowledgement is to be considered adequate return to the sender. Selected titles will be reviewed as space permits.*

Chemistry and therapy of diseases of pregnancy. American Lecture Series.

By John Quincy Adams, M.D., M.S., Assistant Professor of Obstetrics and Gynecology, University of Tennessee College of Medicine, Memphis. 79 pp. Price $4.50. Charles C Thomas, Springfield, Ill. 1962.

Disseminating fungus diseases of the lung. American Lecture Series.

By Alvis E. Greer, M.D., F.A.C.P., M.C.C.P., Emeritus Professor of Clinical Medicine, Baylor University College of Medicine, Consultant in Medicine, Memorial Hospital, Houston. 398 pp. Illustrated. Price $14.75. Charles C Thomas, Springfield, Ill. 1962.

Pulmonary structure and function. Ciba Foundation Symposium.

By editors for the Ciba Foundation, A.V.S. DeReuck, M.Sc., D.I.C., A.R.C.S., and Maeve O'Connor, B.A. 403 pp. Illustrated. Price $11.50. Little, Brown and Company, Boston. 1962.

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By editors for the Ciba Foundation, G.E.W. Wolstenholme, O.B.E., M.A., M.B., M.R.C.P., and Margaret P. Cameron, M.A. 419 pp. Illustrated. Price $10.75. Little, Brown and Company, Boston. 1962.

Lipoprotein chemistry in health and disease. American Lecture Series.

By Ronald L. Searcy, Ph.D., Associate Professor of Pathology, California College of Medicine, Clinical Biochemist and Associate Attending Staff Member, Los Angeles County General Hospital, Co-director, Cardiovascular Research Center, Research Associate, Burbank Hospital, Burbank, Consultant, Council on Drugs, American Medical Association, and Lois M. Berquist, M.S., Visiting Assistant Professor of Pathology, California College of Medicine, Instructor of Biological Sciences, Los Angeles Valley College, Research Associate, Cardiovascular Research Center, Burbank. 197 pp. Illustrated. Price $8.00. Charles C Thomas, Springfield, 1962.

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Edited by Howard F. Conn, M.D., with consulting editors. 775 pp. Price $12.50. W. B. Saunders Company, Philadelphia and London. 1963.

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By W. C. Heinz. 245 pp. Price $3.95. Doubleday & Company, Garden City. 1963.

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Physiology of the circulation in human limbs in health and disease.

By John T. Shepherd, M.D., M.Ch., D.Sc., Professor of Physiology, Mayo Foundation Graduate School, University of Minnesota, Rochester, Consultant, Section of Physiology, Mayo Clinic. 416 pp. Illustrated. Price $12.00. W. B. Saunders Company, Philadelphia and London. 1963.

The fat boy goes poly-unsaturated.

By Elmer Wheeler. Price $3.50. 156 pp. Illustrated. Doubleday & Company, New York. 1963.

Fungus diseases of the lungs. Second edition. American Lecture Series.

By Davis T. Smith, M.D., Professor of Microbiology, Associate Professor of Medicine, Duke University School of Medicine, Durham, N. C. 113 pp. Illustrated. Price $5.00. Charles C. Thomas, Springfield. 1962.

Synopsis of pediatrics.

By James G. Hughes, B.A., M.D., Professor of Pediatrics and Chairman of the Department of Pediatrics, University of Tennessee College of Medicine, Memphis. Chief of the Pediatric Service, Frank T. Tobey Memorial Children's Hospital (City of Memphis Hospitals); Staff Member and former Chief of Staff of the LeBonheur Children's Hospital, Memphis; with the collaboration of twenty faculty members of the University of Tennessee College of Medicine. 1031 pp. Illustrated. Price $9.85. The C. V. Mosby Company, St. Louis. 1963.

Geriatric surgical emergencies.

Edited by J. E. Jesseph, M.D. and Henry N. Harkins, M.D., Ph.D., with sixteen contributing authors from The Department of Surgery, University of Washington School of Medicine and The Veterans Administration Hospital, Seattle, 447 pp. Illustrated. Price $16.00. Little, Brown and Company, Boston. 1963.

Sarcomas of the Brain. Carl Vernon Weller Lecture Series.

By James W. Kernohan, M.D., D.P.H., Senior Consultant, Section of Pathologic Anatomy, Mayo Clinic, Professor of Pathology, Mayo Foundation, Graduate School, University of Minnesota, and Alfred Uihlein, M.D., Consultant, Section of Neurologic Surgery, Mayo Clinic, Associate Professor of Neurologic Surgery, Mayo Foundation, Graduate School, University of Minnesota. 192 pp. Illustrated. Price $8.00. Charles C Thomas, Springfield. 1962.

Gastroenterology. Second edition. Volume I.

By H. L. Bockus, M.D., Emeritus Professor of Medicine, University of Pennsylvania Graduate School of Medicine, and Present and Former Colleagues at the University of Pennsylvania Graduate School of Medicine and School of Medicine. 958 pp. Illustrated. Price $25.00. W. B. Saunders Company, Philadelphia and London. 1963.

WASHINGTON

Washington State Medical Association—1309 SEVENTH AVENUE, Seattle 1, Washington

PRESIDENT *Dean K. Crystal, M.D., Seattle*
SECRETARY *Wilbur E. Watson, M.D., Seattle*
EXECUTIVE SECRETARY *Mr. R. W. Neill, Seattle*
annual meeting September 15 - 18, 1963, Seattle

WAPG Annual Scientific Session

HERBERT GRISWOLD, M.D.

A. A. WARD, JR., M.D.

GRIFFITH E. QUINBY, M.D.

JESS READ, M.D.

George Crile will be one of the major speakers at the Annual Scientific Session of the Washington Academy of General Practice in the Chinook Hotel, Wenatchee, May 16-18. Dr. Crile is head of the Department of General Surgery in the Cleveland Clinic, Cleveland, Ohio. His three talks will deal with treatment of cancer.

Other speakers will include Herbert Griswold, of the University of Oregon Medical School; Jess Read, Tacoma surgeon; Arthur A. Ward, Jr., and Clement A. Finch, both of the University of Washington School of Medicine.

Thursday, May 16, will be devoted to meetings of the Board of Directors and the House of Delegates. A special women's program has been set up for May 17 and 18, and a boat trip up Lake Chelan has been arranged for Sunday, May 19, for attending physicians and their wives. Scientific portion of the program follows:

GEORGE CRILE, JR., M.D.

Friday, May 17

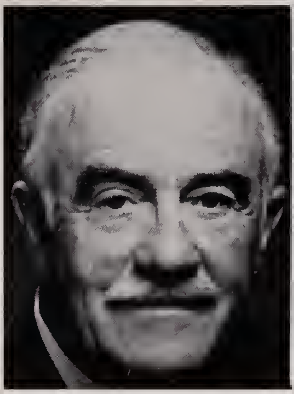
9:00	Exhibits open	
9:50	Acute Otitis Media	*W. Baldwin, M.D.*
10:20	The Arrhythmias	*J. H. Delaney, M.D.*
10:50	Some Biological Considerations in Treatment of Cancer	*George Crile, M.D.*

1:15 On Listening to the Heart *H. Griswold, M.D.*
2:00 How to Prevent Head Injuries *A. A. Ward, Jr., M.D.*
2:40 Diagnosis and Treatment of Respiratory Acidosis *T. Fuller, M.D.*
3:30 Treatment of Cancer of the Breast *G. Crile, M.D.*
4:20 Selection of Patients for Aortic and Mitral Valve Replacement *H. Griswold, M.D.*

Saturday, May 18

8:30 Acute Hand Injuries *J. Read, M.D.*
9:00 Surgical Treatment of Parkinsonism *A. A. Ward, Jr., M.D.*
9:40 Treatment of Carcinoma of the Thyroid *G. Crile, M.D.*
10:50 Circulatory Adjustments in Aortic Insufficiency *H. Griswold, M.D.*
11:15 Dupuytren's Contracture *J. Read, M.D.*
11:45 Recognition and Treatment of Organic Phosphate Insecticide Poisoning *G. Quinby, M.D.*
1:40 Treatment of Coronary Artery Disease *H. Griswold, M.D.*
2:20 Recent Advances in Surgical Therapy of Epilepsy *A. A. Ward, Jr., M.D.*
2:40 Diagnosis and Treatment of Anemia *C. Finch, M.D.*

Heart Association meets



HOWARD B. SPRAGUE

ROBERT L. VAN CITTERS

Annual meeting of the Washington State Heart Association will be held at the Washington Athletic Club, Seattle, May 2. Howard B. Sprague, of Brookline, Massachusetts will be the guest speaker. His afternoon presentation will be on Trauma and Strain and the Medicolegal Aspects of Coronary Disease. Robert L. Van Citters, of the University of Washington, will give the luncheon address on Heart Research in Russia. This will be a report of his observations when an exchange fellow under the U. S.-U. S. S. R. exchange program.

Postgraduate coagulation course

A postgraduate course on coagulation will be offered May 16-18 by the University of Washington Medical School. Open to physicians and medical technicians, the course will cover both theory and practice in the understanding of coagulation disorders.

Guest faculty for the sessions will be Benjamin Alexander, Associate Professor of Medicine, Harvard Medical School; Samuel I. Rapaport, Associate Professor of Medicine, University of Southern California School of Medicine at Los Angeles, and Sol Sherry, Professor of Medicine, Washington University, St. Louis, Mo.

University of Washington faculty participating will include Earl W. Davie, Ph.D., Robert S. Evans, Melvin M. Figley, Clement A. Finch, Lamont W. Gaston, John R. Hartmann, and Cecil Hougie.

The course will be held in the Health Sciences Building Auditorium and Laboratories on the University of Washington campus. Registration fee for phyicians is $60.00. Further information on the program may be obtained from the Division of Postgraduate Medical Education at the School of Medicine.

Northwest Rheumatism Society

John Lansbury, of Temple University School of Medicine, Philadelphia, will discuss "How to Measure Responses to Therapy in Rheumatoid Arthritis" at the Interim Clinical Meeting of the Northwest Rheumatism Society. The meeting will be at the Davenport Hotel, Spokane, Saturday, April 27. The program includes other topics of general interest, including discussion of immunologic reactions to malignancy and laboratory aids in rheumatic disease. A panel discussion on current trends in therapy will be presented by E. E. Rosenbaum, Robert S. Johnson, Robert Wilkens and Dr. Lansbury.

Conference: cars, crashes, casualties and care

Trauma, a topic of major importance in current medical practice, is the subject of a postgraduate course to be given at the University of Washington School of Medicine, Seattle, May 23, 24. The course will bring together a faculty representing a vast amount of information on basic principles and recent developments in the care of injuries. Although not confined to problems arising from traffic accidents, much of the emphasis will be on such cases. Ample time will be devoted to discussion of the urgent problems associated with multiple injuries. The course will range from life saving measures in emergency to planning for long-term functional and cosmetic repair. There will be opportunity for general discussion and questions.

Faculty includes Julian S. Ansell, Head, Division of Urology; D. Kay Clawson, Head, Division of Orthopedic Surgery; Eldon L. Foltz, Division of Neurosurgery; and Henry D. Green, Department of Anesthesiology.

Guest speakers include, Horace E. Campbell, Chairman, Automotive Safety Committee, University of Colorado School of Medicine, Denver; Mr. Louis C. Lundstrom, Director, General Motors Proving Ground, Milford, Michigan; Robert M. McCormack, Professor of Plastic Surgery, University of Rochester School of Medicine and Dentistry, Rochester, N. Y.; Victor Richards, Chief of Surgery, Presbyterian Medical Center, San Francisco; and Frank C. Spencer, Professor of Surgery University of Kentucky School of Medicine, Lexington, Kentucky.

Mr. Lundstrom will speak on automotive safety research at a banquet at the Windjammer Restaurant, Thursday evening, May 23. Full information on the course may be obtained from Mrs. Alice Steen, 304 Health Sciences Building, University of Washington School of Medicine, Seattle 5.

Clark County Medical Society

Clark County Medical Society held its regular monthly meeting in Vancouver on Tuesday, March 5.

Following dinner and social hour, one of the past year's largest turnouts listened to Dean Crystal, WSMA president, discuss matters of interest pertaining to the medical profession on a state-wide basis.

Tacoma Surgical Club annual meeting

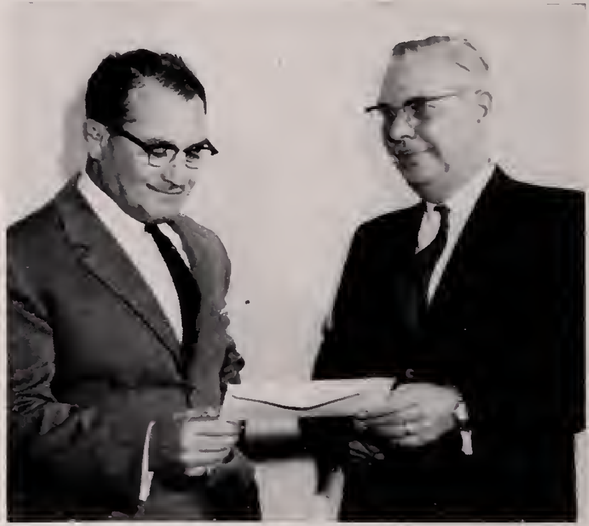
Two guest surgeons will speak at the all-day annual meeting of the Tacoma Surgical Club, Saturday, May 4, at Jackson Hall, Tacoma General Hospital School of Nursing. Joseph H. Boyes, clinical professor of surgery, University of Southern California, known for work in hand surgery, will give a paper at the afternoon session and the address at the evening banquet. David L. Bassett, professor of anatomy at University of Washington School of Medicine, will speak at the afternoon session. Program is as follows:

9:00 a.m. Anatomical Dissections and Demonstrations

2:00 p.m. Scientific Papers

Anatomy of the Hand in Stereoscopic Projection — *D. L. Bassett, M.D.*
Renal Injuries — *H. C. Kennedy, M.D.*
Tendon Healing — *J. W. Read, M.D.*
Regional Anesthesia for Upper Extremity — *W. H. Pratt, M.D.*
Intrinsic Muscle Function and Rheumatoid Arthritis of the Hand — *J. H. Boyes, M.D.*
"Routine" Hand Repair — *J. H. Alger, M.D.*
Bunionectomy — *W. G. Peterson, M.D.*
Discussion of Afternoon Papers — *J. H. Boyes, M.D.*

7:30 p.m. Dinner, *Dumont Staatz, M.D.*, presiding
The Primary Care of the Injured Hand — *J. H. Boyes, M.D.*



An unrestricted $5000 grant for medical research is presented to John J. Bonica (right), executive officer, Department of Anesthesiology, University of Washington School of Medicine, by Mr. Thomas M. Curtis, clinical associate of Wyeth Laboratories. The Wyeth award is one of twenty made annually by the Philadelphia pharmaceutical manufacturer to further medical research by medical schools and hospitals.

continued from page 243

trained nurse, there would be an important place for her in the nurses training program; or to a school teacher, an opportunity to teach in the secondary school on the hospital compound.

Extensive experience is not a requirement but graduation from an "A" class medical school is. Professional practice at the Namkham Hospital is intensive, widely varied and often rare to Western medical experience.

The candidate must be prepared to leave for Burma not later than the Spring of 1963, or sooner if possible (depending upon issuance of his visa) so that his appointment can overlap that of the American doctor now serving the program.

This appointment offers a modest salary per annum. Travel expenses and Western style housing will be provided. Anyone interested should write: American Medical Center for Burma, Inc., 6 Penn Center Plaza, Philadelphia 3, Penn. stating qualifications, etc.

Sincerely yours,
JOHN F. RICH
Executive Vice Chairman

DR. WILLIAM FREDERICK CUNNINGHAM, *90, died December 8 of skull fracture and brain injury resulting from a fall downstairs in the Arctic Club, in Seattle. He was born in Walkstrom, Ontario, Canada, and received his medical degree from Toronto School of Medicine in 1897. He came to Seattle in 1900 and practiced as an eye, ear, nose and throat specialist until his retirement in 1937.*

DR. JAMES GREEN MATTHEWS, *81, died of myocardial failure and diabetes on November 11 at his home in Spokane. His terminal cardiac arrest followed infarcts in 1960, 1961, and 1962. He graduated from the University of Maryland School of Medicine and College of Physicians and Surgeons, Baltimore, in 1905, and was licensed in 1908. He practiced in Spokane for 54 years, and was past-president of Spokane County Medical Society, Spokane Surgical Society, and St. Luke's Hospital staff. He was not in practice at the time of his death.*

DR. ALBERT B. MURPHY, *65, died of coronary thrombosis, in Everett December 15. He was a graduate of Tufts School of Medicine, and obtained his degree in 1919. He was a commissioned officer in the Navy in World War I. He served three years on the staff of Mayo Clinic, Rochester, before opening practice in Everett in 1924. Dr. Murphy acted in many civic and professional capacities; he was vice-president of the Board of Regents of the University of Washington, a director of the Bank of Everett, chairman of Snohomish County Democratic Party, and past president of Snohomish County Medical Society.*

DR. GEORGE IRA MELHORN, *of Seattle, died December 2, of a recurrent brain tumor. He was 33 and had been a member of the Tumor Institute Staff, in Seattle, for several years. He was a specialist in radiology. He graduated from George Washington University School of Medicine in 1955.*

DR. ROBERT WHITCOMB BROWN, *61, assistant superintendent of Western State Hospital, Fort Steilacoom, died October 11, of massive hemorrhage from abdominal aneurysm. He received his medical training at Harvard Medical School, Boston, and graduated in 1928. From 1932 until 1937 he was senior physician at the Cambridge State School and Hospital. He served as consultant to the Buckley School for a time and came to Western State as neurologist, being appointed clinical director in 1951 and assistant superintendent in 1961.*

DR. ALBERTUS HENRY BUIS, *Tacoma, died suddenly November 2, apparently from coronary occlusion. He was 70. His medical degree was obtained at Rush Medical College, Chicago, in 1919 and he practiced in Tacoma from 1920 until his retirement in 1947.*

DR. WILLIAM DORMAN CLARK, *of Battle Ground, died September 16, of cerebral thrombosis, arteriosclerosis, diabetes, and carcinoma of the prostate. He graduated from the University of Kansas School of Medicine in 1928 and came to Washington the following year. He had practiced in Battle Ground for 25 years. Dr. Clark served with the Army Air Corps in World War I.*

DR. LEWIS BATY HUNTER, *53, staff member of Veterans Administration Hospital, Spokane, died of myocardial insufficiency due to myocardial infarction, on January 12. He attended the State University of Iowa College of Medicine in Iowa City, and was granted his degree in 1939. He had been on the staff of VA in Spokane for nine years.*

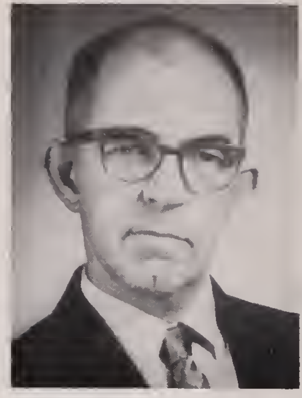
Tacoma
Electrophysics Laboratory

Electroencephalography
Electromyography

JOHN T. ROBSON, M.D.
STEVENS DIMANT, M.D.
MARCEL MALDEN, M.D.
LORRAINE KNUDSON, R.N.

Puget Sound Medical Building
1104-06 South 4th Street
Tacoma 5, Washington

PRESIDENT'S page



DEAN K. CRYSTAL, M.D.

Recently this page was used to underline the importance of political activity on the part of the profession.

Now that the legislative session in Olympia has closed, it probably is most important that we review a number of lessons which we as a profession, and as political novices, could be said to have learned during the course of this session.

First of all it must be said that the hallmark of this entire sessions was "NO!" probably as a response (belated but emphatic) to years and years of free spending on the part of our legislature and on the part of our state government generally. Most politicians were anxious to appear to the voters to be "conservative" this time, especially as regards the citizens' tax money.

There was little discrimination in the blanket refusals to appropriate more money. People may be upset over the failure of pet projects to pass. All in all, however, a session of thrift may be a really healthy reaction and come, despite some of its shortcomings, as a relief to those of us who have seen our financial situation grow worse and worse.

The staff and officers of the Washington State Medical Association attempted to keep close attention to those issues in the legislative grist which bore on health. There were, in all, over thirty bills relative to welfare, more than twenty-five pertaining to mental health, five or six relating to osteopathy, three concerned with medical corporations or associations and a number of others that had to do with broad aspects of sanitation, public health, water supplies, etc., etc. The best and most succinct way to comment is that nearly all the bills died in committee.

The primary lesson which your President feels he learned and which he thinks must be passed as a legacy to future officers and to those who set the state association policies involves both a technique and a time schedule for the introduction of legislation in future sessions.

In the first place, no legislation which we should like to see passed apparently can go through our legislature unless it becomes identified with a pressure group. One of the most shocking revelations of the current session was the somewhat weary and cynical statement from an experienced legislator who told me very frankly that our hope for getting a rational system of medical examiners established in this state obviously could not succeed because the only people it benefited were all the people in the State. This old pro made it plain that the only way we ever could look forward to successful establishment of a medical examiners system or any other matter which is close to our hearts as doctors is to be sure that we have an organized minority which not only pushes vigorously for enactment of laws, but which, in a sense, has something to trade with other pressure groups.

Certainly this may come as a repugnant discovery to a number of our more timorous members, but it is important and should not be forgotten.

Yet another problem is that of timing. In the session now drawing to a close, one of the measures which your officers felt really required enactment was increase in the license renewal fees for the Board of Medical Examiners in this State. Our board is comprised of five of our own members and has been attempting to keep up with the 1960's on the basis of income and staff suitable, perhaps, to conditions of thirty or forty years ago. Our medical examining board has no status independent from that of the general licensing bureau. No one on the Board can criticize the members of the License Bureau. The relationship has always been cordial and fruitful of cooperation, but it has been the conviction, both of the Department of Licenses and of the Medical Examining Board, that considerably more investigation of applicants should be done. Under the present arrangement there simply are no finances available for competent investigation of those who come here as new young graduates and, probably even more important, those who come here on reciprocity. Funds have been so meager for this important function that our own men who have served as examiners have not had any transportation paid, at times when they were giving examinations have had no per diem allowances and, in most instances, even have had to provide their own meals. In addition, the chairman of our examining board, John Fiorino of Everett, has paid his own way to national conventions of medical examining boards and apparently has made a sufficiently good impression on his colleagues from other states so that he now enjoys status as an officer of the Federation of State Medical Boards of the United States.

Much too late to expect favorable enactment, the Medical Examining Board and the State Association endeavored to get a bill through the Legislature which would have corrected a number of these glaring inequities. It was lost—and in committee—because of pressure by a small minority of medical people within the state who probably did not understand a good bit of the purpose of the bill, or who simply were happy to find an opportunity to register an objection to something, however vague.

It should be the intention of future officers and of future legislative committees to see to it that those bills which are in need of enactment, and have a bearing on health matters, are prepared in an expert, professional manner as acceptable bills, not simply as abstracts of laws which are reported in the lay press from other States; and that these carefully weighed and debated measures in proper form are available for presentation via helpful legislators to the suitable committees within the first two or three days of a legislative session. There is no other way that our intentions can get an adequate hearing. There is no other way that forces in their favor can be marshaled and repeatedly assembled, if necessary, to secure passage through the legislative labyrinth. If no other lession were forthcoming, this one certainly should be plain to all.

It must be said in closing that our legislative representatives, those who were our lobbyists, Mr. Richard Gorman and Mr. Harlan Knudsen, worked with extraordinary vigor in our behalf. We have nothing but praise for them. Our lobbyists, however, were never confused about their role. They knew it was up to them to speak for the medical association and to keep alert to developments as they presented themselves., Neither of these fine gentlemen, however, endeavored to become policy makers. They rely on us for direction. Unfortunately, your association officers, with the best intent in the world, did not, in most instances, recognize the overwhelming importance of methods of presentation of issues to the legislature and probably even more important the necessity for a reasonable time table. Certainly these defects must be corrected in the future.

Dean K Crystal, M.D.

Coca-Cola, too, is compatible with a well-balanced menu. As a pure, wholesome drink, it provides a bit of quick energy..brings you back refreshed after work or play. It contributes to good health by providing a pleasurable moment's pause from the pace of a busy day.

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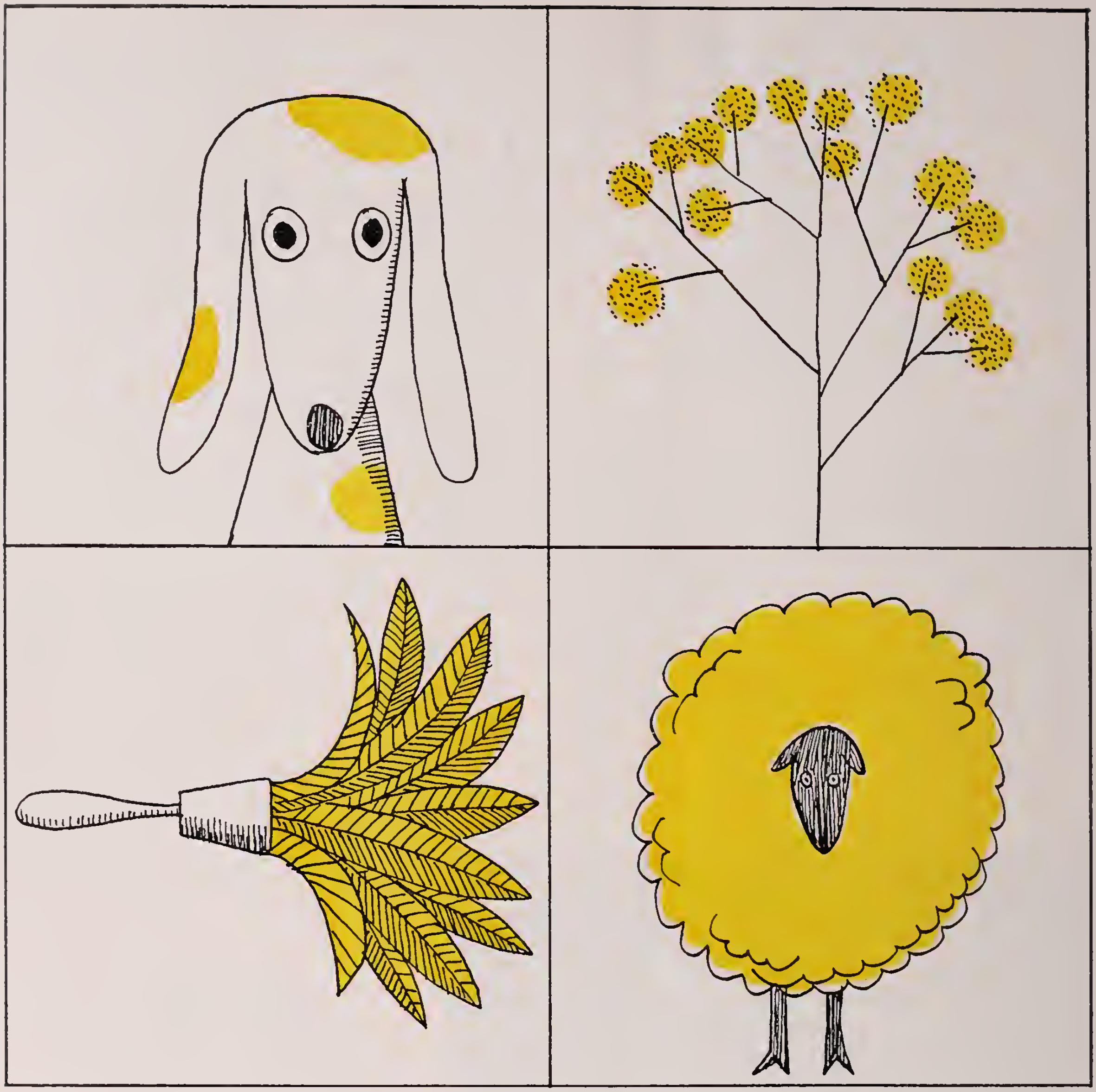

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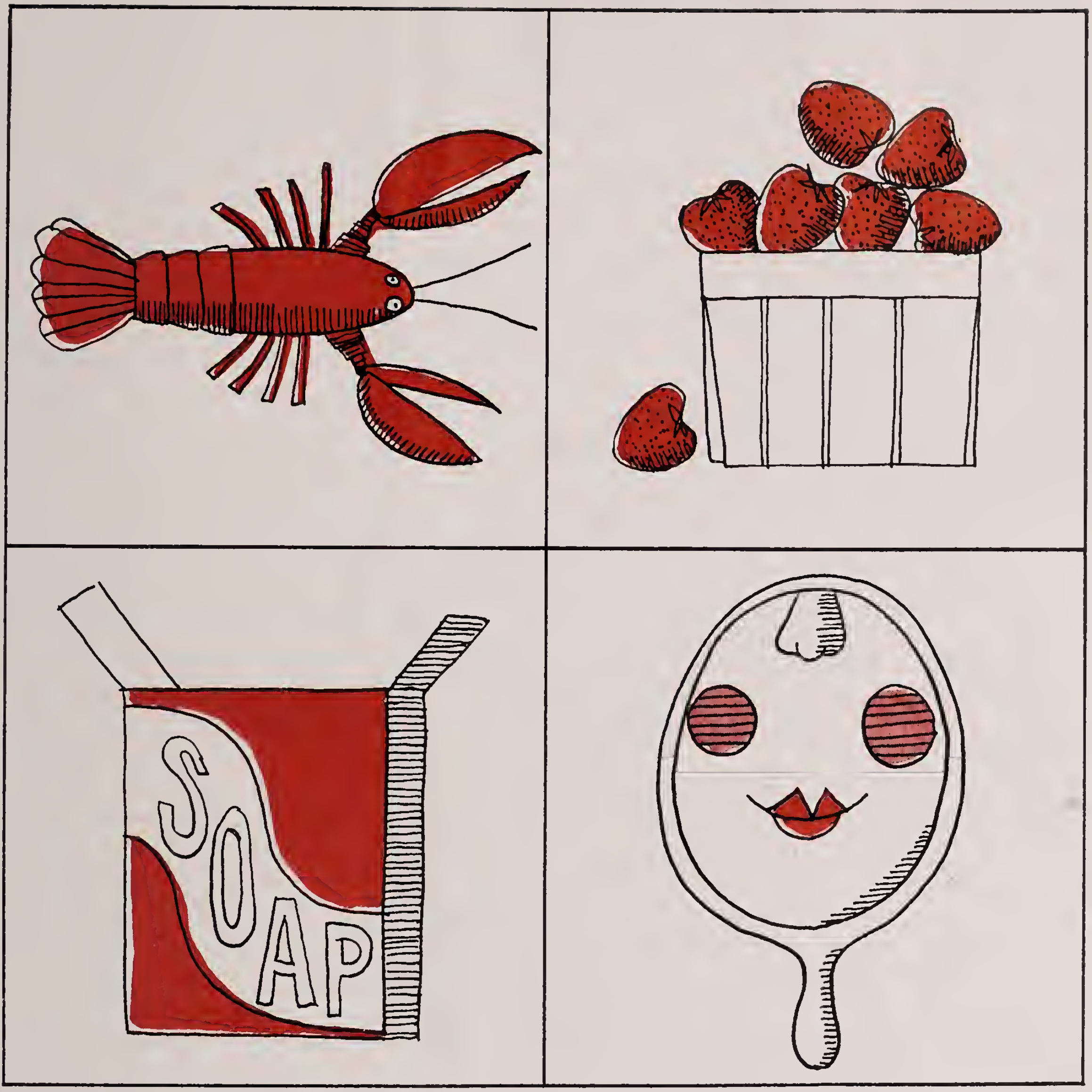

you can relieve his symptoms promptly with Pyribenzamine

Expectorant with Codeine and Ephedrine (orange, peach-flavored), containing 30 mg. Pyribenzamine citrate, 8 mg. codeine phosphate, 10 mg. ephedrine sulfate, and 80 mg. ammonium chloride per 4-ml. teaspoon. Exempt narcotic.

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Ointment, 2% (petrolatum base).

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IDAHO

Idaho State Medical Association—364 SONNA BUILDING, Boise, Idaho

PRESIDENT	*Manley Shaw, M.D., Boise*
SECRETARY	*A. Curtis Jones, M.D., Boise*
EXECUTIVE SECRETARY	*Mr. A. L. Bird, Boise*

annual meeting June 26-29, 1963, Sun Valley

Annual meeting plans

The Program Committee met at Sun Valley on March 8 and 9 to make final arrangements for the 71st annual meeting of the Idaho State Medical Association, June 26-29, 1963. Committee members attending were Max F. Bell, Boise, Chairman; George W. Warner, Twin Falls; J. Douglas Davis, Idaho Falls, and Oliver M. Mackey, Jr., Lewiston. President Manley B. Shaw, Boise; President-Elect Paul B. Heuston, Twin Falls; Secretary-Treasurer A. Curtis Jones, Boise, Councilor James R. Kircher, Burley and Executive Secretary Bird.

The auxiliary was represented by Mrs. Glen M. Whitesel, Kellogg, President, and Mrs. Richard A. Forney, Boise, Program Chairman.

The meeting had its unfortunate aspects. President-Elect Heuston broke his leg skiing, and Mr. Bird suffered a mild coronary. Both were in the Sun Valley Hospital for two weeks, but have now been returned to their homes, and are doing quite well.

The ten Guest Speakers for the 71st annual meeting are:

Benson B. Roe, San Francisco, Associate Professor of Surgery, University of California School of Medicine.

Carl M. Eklund, Hamilton, Montana, Medical Director, National Institute of Allergy and Infectious Diseases, Rocky Mountain Laboratory, U. S. Public Health Service.

George E. Moore, Buffalo, N.Y., Director, Roswell Park Memorial Institute, Department of Health, State of New York.

George H. Lowrey, Ann Arbor, Michigan, Associate Professor of Pediatrics, University of Michigan Medical School.

D. H. Stoddard, Washington, D. C., Assistant Director for Medical Operations, Space Medicine, Office of Manned Space Flight, National Aeronautics and Space Administration.

Allan C. Barney, Baltimore, Professor and Chairman, Department of Obstetrics and Gynecology, Johns Hopkins University School of Medicine.

William E. Snell, Portland, Associate Professor of Orthopedic Surgery and Head of the Department of Orthopedics, University of Oregon Medical School.

James V. Warren, Columbus, Professor, Department of Medicine, Ohio State University College of Medicine.

Norman J. Wilson, Boston, Assistant Clinical Professor of Surgery, Tufts University School of Medicine, and Associate, Overholt Thoracic Clinic.

John K. Frost, Baltimore, Director, Division of Cytopathology, Johns Hopkins University School of Medicine.

Each Guest Speaker will present two papers.

Featured Speaker for the meeting will be Norman A. Welch, Boston, Speaker of the House of Delegates, American Medical Association. The topic of his address to all attending the meeting will be "Problems Associated with the Preservation of the Private Practice of Medicine."

Social events:

Wednesday, June 26: "Welcome to Sun Valley" Cocktail Party and Buffet Dinner.

Thursday, June 27: The Annual Barbecue at Trail Creek.

Friday, June 28: Open for your personal plans. Nothing scheduled.

Saturday, June 29: The Annual President's Banquet in the Lodge Dining Room. The dress-up party of the meeting will be followed by dancing on the Lodge Terrace.

Record session ends

The 37th session of the Idaho State Legislature adjourned sine die the afternoon of March 19. The 72-day session was the second longest in the seventy three year history of State Legislative Sessions. The first session of the Legislature, 1890-1891, lasted 82 days.

A complete report of the activities of the Association's Legislative Committee will be presented to the June meeting of the House of Delegates by Loy T. Swinehart, Boise, Chairman.

Our Legislative Dispensary, operated under the capable direction of C. A. Robins, Lewiston, again proved to be an excellent public relations project. The Association received much publicity on this project and many favorable comments from the legislators. During the session senators and representatives and attaches from 43 of the 44 counties visited the dispensary for a total of 488 calls.

Meetings scheduled

Boise, May 25. Owyhee Hotel and Motor Inn. Spring meeting of the Boise Valley Chapter, American College of Surgeons. Guest speaker will be David Dahlin, Surgical Pathologist, Mayo Clinic. Richard A. Forney, Boise, is president of the organization.

Ogden, May 22, 23, 24. The 18th Annual Meeting of the Ogden Surgical Society.

State Board of Medicine section

High tribute was paid to S. M. Poindexter, Boise, Chairman of the Idaho State Board of Medicine, in Chicago early in February when he presided at the annual meeting of the Federation of State Medical Boards of the United States. Dr. Poindexter served as president of the organization during the past year.

The session, in connection with the A.M.A.-sponsored Annual Congress on Medical Education, was held at the Palmer House. Other members of the Board who attended the session included W. Wray Wilson, Coeur d'Alene; John E. Comstock, Pocatello; and Charles E. Kerrick, Caldwell.

New members of the Idaho State Board of Medicine, appointed by Governor Robert E. Smylie, upon the recommendation of the Officers and Councilors of the Idaho State Medical Association are:

Charles E. Kerrick, Caldwell, six-year term, until March 17, 1969; Charles A. Terhune, Burley, six-year term, until March 17, 1969; James S. Newton, Lewiston, four-year term, until March 17, 1967 to complete the unexpired term of the late Clarence I. Gibbon of Kellogg.

Two temporary licenses were issued in February. Receiving them were: Jack Darwin Noyes, Mountain Home AFB, (locum tenems, Cascade.) Graduate Stanford University School of Medicine, 1960. Internship USAF Hospital, Lackland AFB, Texas. General.

Conlyn John Cederblom, Coeur d'Alene. Graduate University of Virginia School of Medicine, 1961. Internship Springfield City Hospital, Springfield, Ohio, 1961-62. General.

Idaho helps students

Under the plan supervised by Western Interstate Commission for Higher Education, Boulder, Colorado, Idaho is contracting to pay the difference between in-state and out-of-state tuition for 45 Idaho medical students. Preferential admission to any of 13 Western schools under WICHE is given qualified students resident in states having no professional schools in their fields. The student pays in-state tuition and the "sending state" pays the school a fee approximating the out-of-pocket cost to the institution. Idaho presently has 89 students studying at medical schools, dental schools and colleges of veterinary medicine in other Western states.

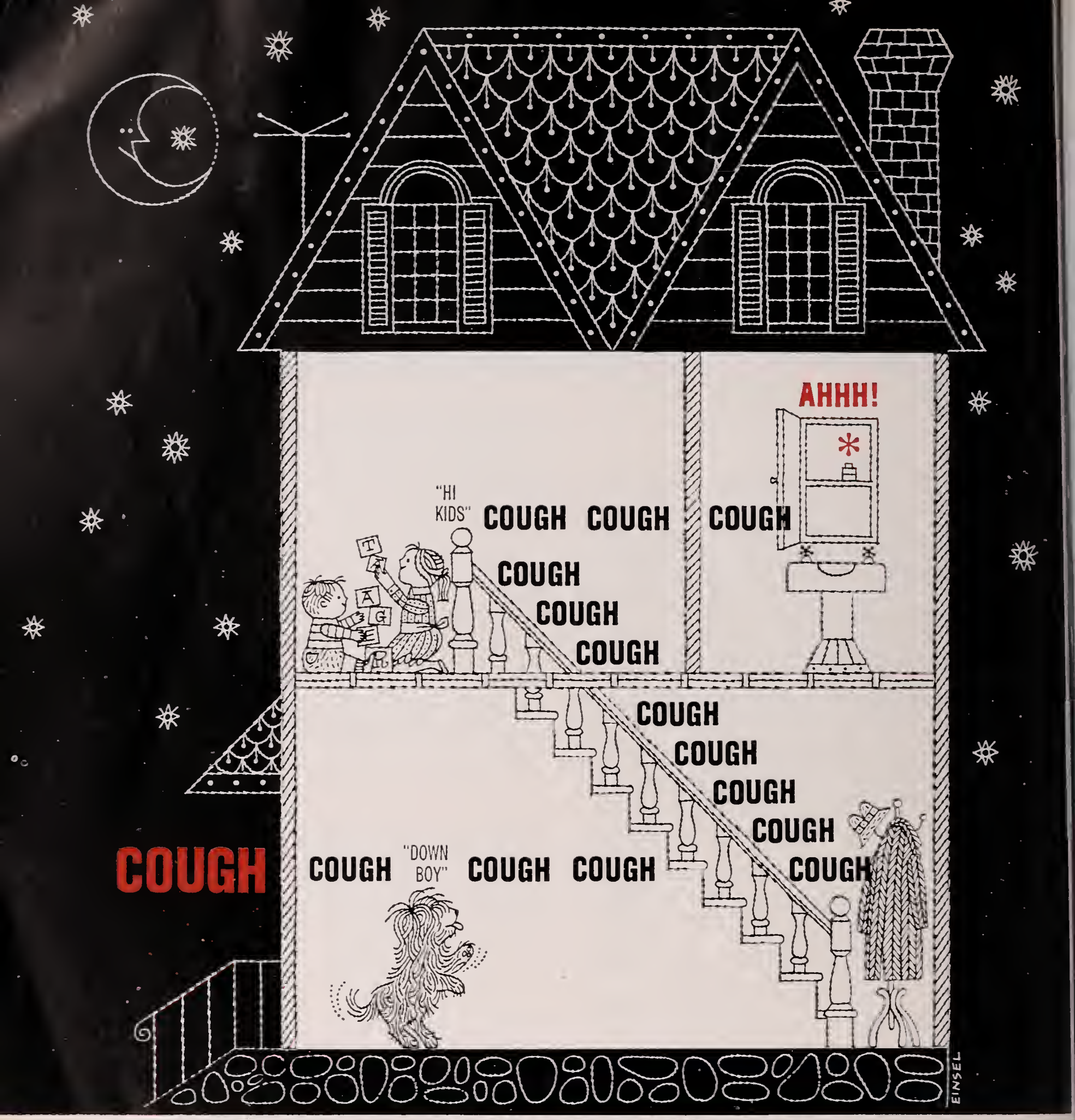
Service Bureau officers meet

The Executive Secretary and officers of the South Idaho M.S.B., Inc., met March 11 to review the Basic Subscriber's Contract and the Blue Cross Contract. Present at the meeting were Joseph M. Thomas, President; William D. Forney, Secretary-Treasurer, Manley B. Shaw and A. Curtis Jones, all of Boise.

OBITUARIES

DR. FRANCIS SAMUEL MILLER, *84, died in Pocatello February 27. He was born January 7, 1879 in Jonesboro, Tennessee and received his early education there. After serving in the U. S. Army during the Spanish-American War, he entered the Chattanooga Medical College and received his M.D. degree in 1908. Dr. Miller then practiced medicine and surgery in Oaksdale, Washington for several years before moving to Pocatello where he entered practice with his brother, Dr. James Miller. Dr. Miller retired from active practice in 1948.*

DR. CLARENCE IRWIN GIBBON, *of Kellogg, died of coronary occlusion, January 4. He was 47. His medical degree was granted by the University of Colorado School of Medicine in 1946 and he was licensed in Idaho in 1949. His practice was restricted to ENT. Dr. Gibbon was a veteran of World War II and was active in numerous community affairs. He was a member of the Idaho Board of Medical Examiners.*



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Closed Circuit Telecast April 24

A nation-wide, three-part, ninety minute telecast of more than ordinary interest will be sponsored by the A. H. Robins Company, of Richmond, Virginia, Wednesday evening, April 24, 6-7:30 pm. In Portland, the program will be seen at Portland State College, 1620 South West Park Avenue. In Seattle it will be at the Senator Auditorum, 708 Union Street.

George Crile and Owen Wangensteen will provide the first half hour with Dr. Wagensteen answering questions on gastric freezing, second look operations, treatment of intestinal obstruction, new procedures for carcinoma of the breast, treatment of carcinoma of the colon, the future of surgical research and the possibilities offered by chemotherapy of malignancies. This portion of the program will be live, from New York.

The second half hour will be a pre-recorded trans-Atlantic conference between Sheila Sherlock at the Royal Free Hospital in London, and Cecil J. Watson in Minneapolis. Moderator will be Gordon McHardy of Louisiana State Medical School, New Orleans. This team will cover various laboratory tests used in hepatic disease, management of hepatitis, problems associated with portal hypertension, and what treatment may be used in hepatic coma.

The concluding half hour, also live from New York, will be another interview, this time with Peter Forsham, of San Francisco, asking the questions, Tinsley Harrison of Birmingham, Alabama, answering. They will discuss the differential diagnosis of chest pain, and of coronary artery disease. They will offer suggestions on management of patients with angina pectoris and those with various arrhythmias. New methods of treating hypertension will be discussed and Dr. Harrison will conclude with comment on diagnosis and management of pericarditis.

These interview-discussions are expected to be quite informal, revealing not only knowledge and wisdom of the participants but personalities as well. For this reason the program has been called "Colleagues in Close-up." All physicians are invited.

O. H. WANGENSTEEN, M.D.

SHEILA SHERLOCK, M.D.

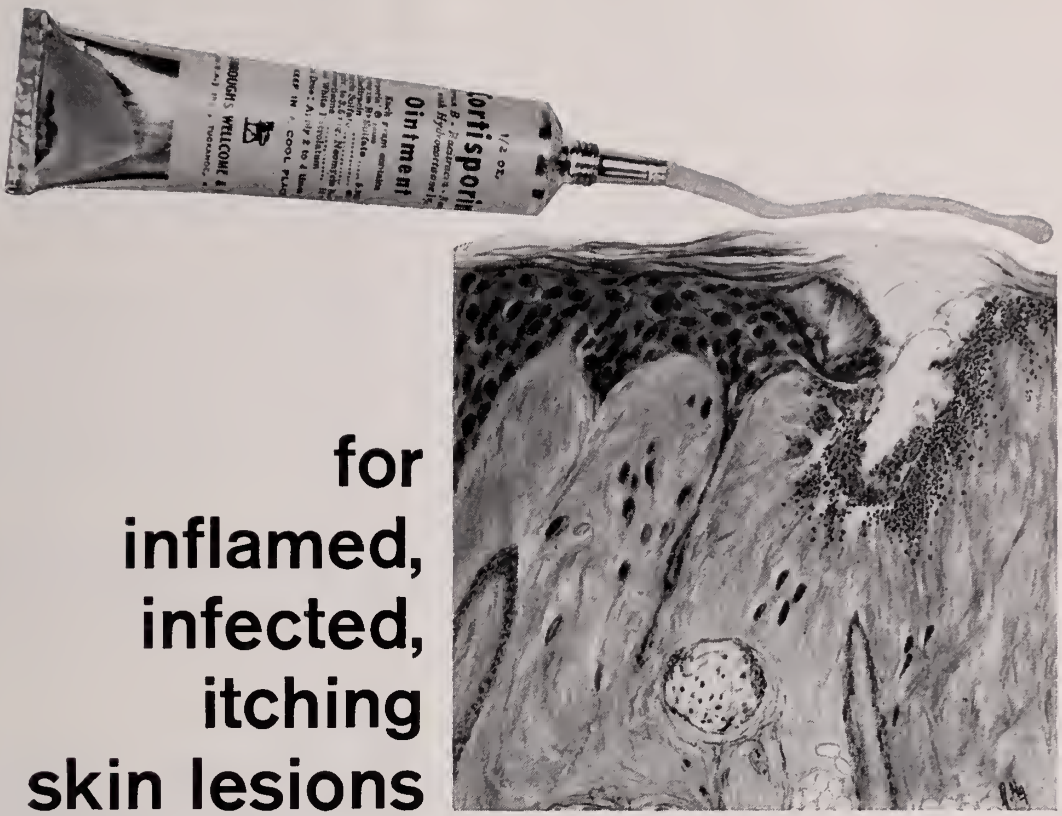
T. HARRISON, M.D.

Loans to Medical Students

Contributions to the student loan fund of the AMA Education and Research Foundation are not used directly but create a guarantee making such loans possible. Each dollar deposited in the fund enables a bank to loan $12.50 to a student, intern, or resident. Maximum per year, per individual, is $1,500.

The original fund, now almost entirely on guarantee deposit, has enabled more than 3,000 individuals to obtain loans totaling more than $6,000,000. If further loans are to be provided there must be contribution to the basic fund.

Tax deduction may be claimed for money given for this purpose. Checks should be sent to AMA-ERF, 535 North Dearborn Street, Chicago 10, Illinois.



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References: (1) Ernst, E. M.: Current Therap. Res. **3**:167, 1961. (2) Starling, R. J.: J.M.A. Georgia **50**:442, 1961. (3) Sprogis, G. R.: Current Therap. Res. **3**:393, 1961. (4) Coffee, H. L.: Clin. Med. **69**:1561, 1962. (5) Mattey, W. E.: Indust. Med. **31**:33, 1962.

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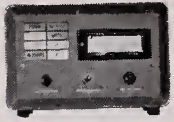

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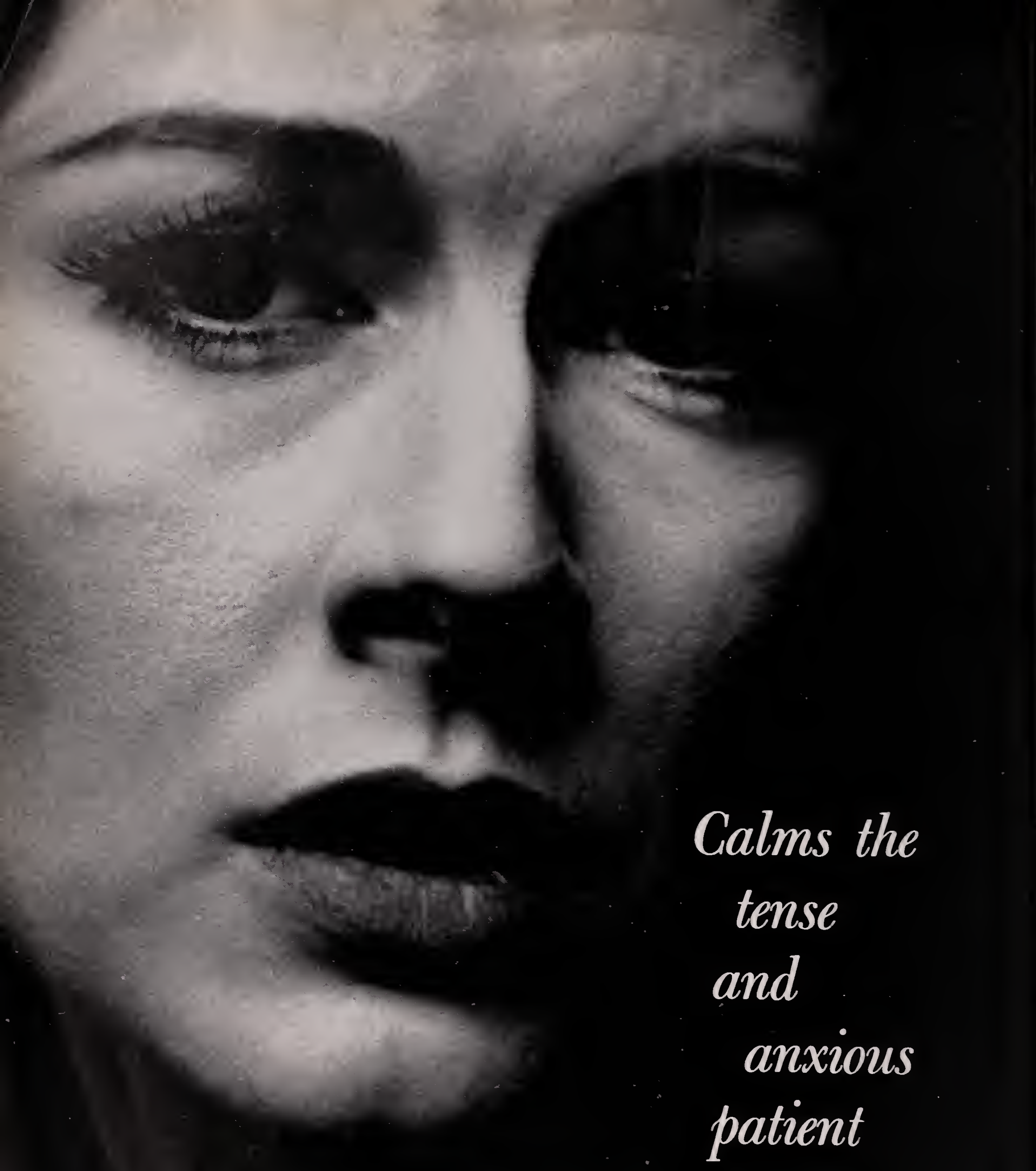

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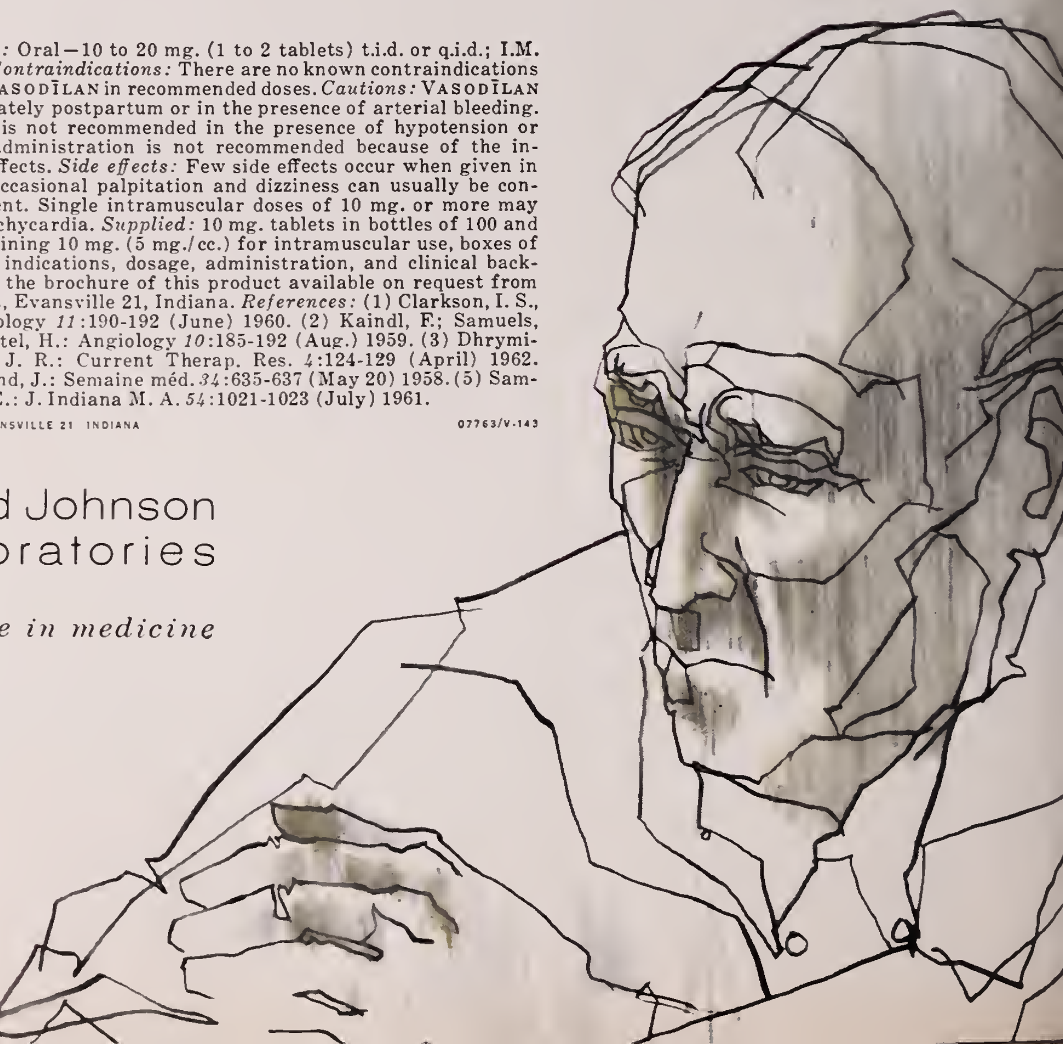

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Meetings OF MEDICAL SOCIETIES

AMA Annual—Atlantic City, June 16-20, 1963; San Francisco, June, 21-25, 1964, New York, June 20-24, 1965.

AMA Clinical—Portland, Dec. 1-4, 1963; Miami Beach, Nov. 29-Dec. 2, 1964.

American Association on Mental Deficiency, Portland, May 21-25, 1963.

Idaho State Medical Association—June 26-29, 1963, Sun Valley.

Northwest Soc. for Clin. Research—Jan. 10-11, 1964, Vancouver, B. C.
Pres., Denys K. Ford, Vancouver
Sec., R. E. Beck, Vancouver

Oregon State Medical Society—Sept. 25-28, 1963, Portland.

Pacific Northwest Obstetrical and Gynecological Association — June 3-5, 1963, Victoria, B.C.
Pres., R. R. de Alvarez, Seattle
Sec., J. McDonagh, Vancouver, B.C.

Washington State Medical Association—Sept. 15-18, 1963, Seattle.

OREGON

Ore. Acad. Ophth. & Otolar.—Portland Aero Club, 4th Tue., Sept.-May.
Pres., M. Harvey Johnson, Portland
Sect., D. W. McDaniel, The Dalles

Oregon Dermatologic Society—Portland 2nd Wednesday (Nov., Jan.-Apr.)
Pres., Sheldon Walker, Portland
Sec., F. A. J. Kingery, Portland

Oregon Pathologists Association—Portland, 2nd Wednesday (Feb., Apr., Oct., Dec.)
Pres., F. L. Vrtiska, Corvallis
Sec., A. A. Oyama, Portland

Oregon Radiological Society—University Club, Portland, 2nd Wednesday through school year
Pres., L. A. Gay, The Dalles
Sec., G. R. Satterwhite, Portland

Ore. Soc. Obst. & Gynec.—Portland, Park Heathman, 3rd Fri. (Oct., Nov., Jan., May)
Pres., W. L. Hartmann, Portland
Sec., T. A. Treanor, Portland

Oregon State Society of Anesthesiologists—Portland, 3rd Friday (except June, July, Aug.)
Pres., J. A. Siebs, Eugene
Sec., P. E. Schaff, Portland

Oregon Urological Society—Quarterly Meetings, University Club, Portland
Pres., T. A. Davis, Portland
Sec., G. W. Schwiebinger, Portland

Portland Academy of Hypnosis — 3rd Monday (Sept.-May) Aero Club
Pres., V. P. Shoemaker
Sec., M. S. Skiff

Portland Academy of Pediatrics—1st Monday
Pres., W. M. Clark, Jr.
Sec., J. W. Bussman

Portland Surgical Society—last Tuesday (Sept.-May), UOMS Library
Pres., J. M. Guiss
Sec., H. W. Baker

WASHINGTON

Puget Sd. Acad. Ophth. & Oto.—3rd Tues. (Oct.-May) Seattle or Tacoma. Annual—Seattle, Jan. 17, 18, 1964.
Pres., H. L. Maier, Tacoma
Sec., D. F. Milam, Jr., Bellevue

Seattle Academy of Surgery—3rd Wed. bi-monthly; Seattle Yacht Club.
Pres., E. B. Parmelee
Sec., W. S. Brown

Seattle Gyn. Soc.—3rd Wed. exc. June, Aug., Dec., Feb.
Pres., D. M. McIntyre, Seattle
Sect., E. T. MacCamy, Seattle

Seattle Pediatric Society—3rd Friday (Sept.-May), College Club
E. J. Wollenweber, Seattle
A. L. Skinner, Seattle

Seattle Surg. So.—4th Mon. (Sep.-June) Annual—Seattle, Jan. 24-25, 1964.
Pres., Eric Sanderson, Seattle
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Spokane Society of Internal Medicine—Quarterly, Rockwood Clinic
Pres., Robert Berghan
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Tacoma Academy of Internal Medicine—4th Tuesday (Sept.-May)
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Tacoma Surgical Club—May 4, 1963, 3rd Tuesday (Sept.-May)
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Washington Academy of General Practice—May 17-19, 1963, Wenatchee.
Pres., Louis Dewey, Omak
Sec., J. E. Gahringer, Jr., Wenatchee

Washington State Obstetrical Associa-October 12, 1963, Yakima.
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Sec., F. LeCocq, Yakima

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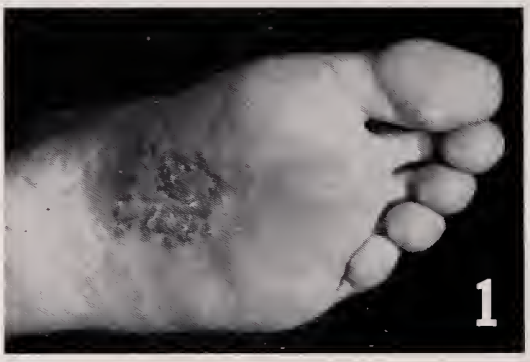
2 After two weeks of therapy.

3 Six weeks later, skin essentially normal (two weeks after termination of therapy).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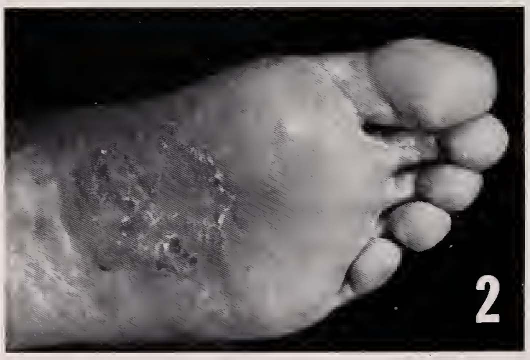
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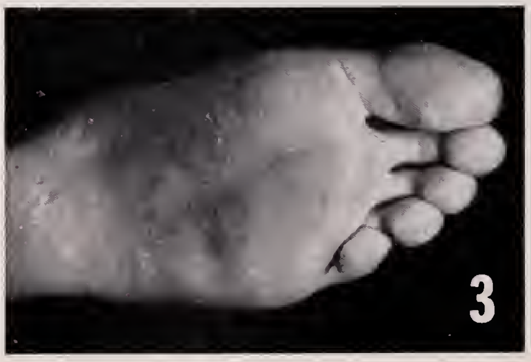
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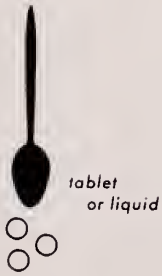

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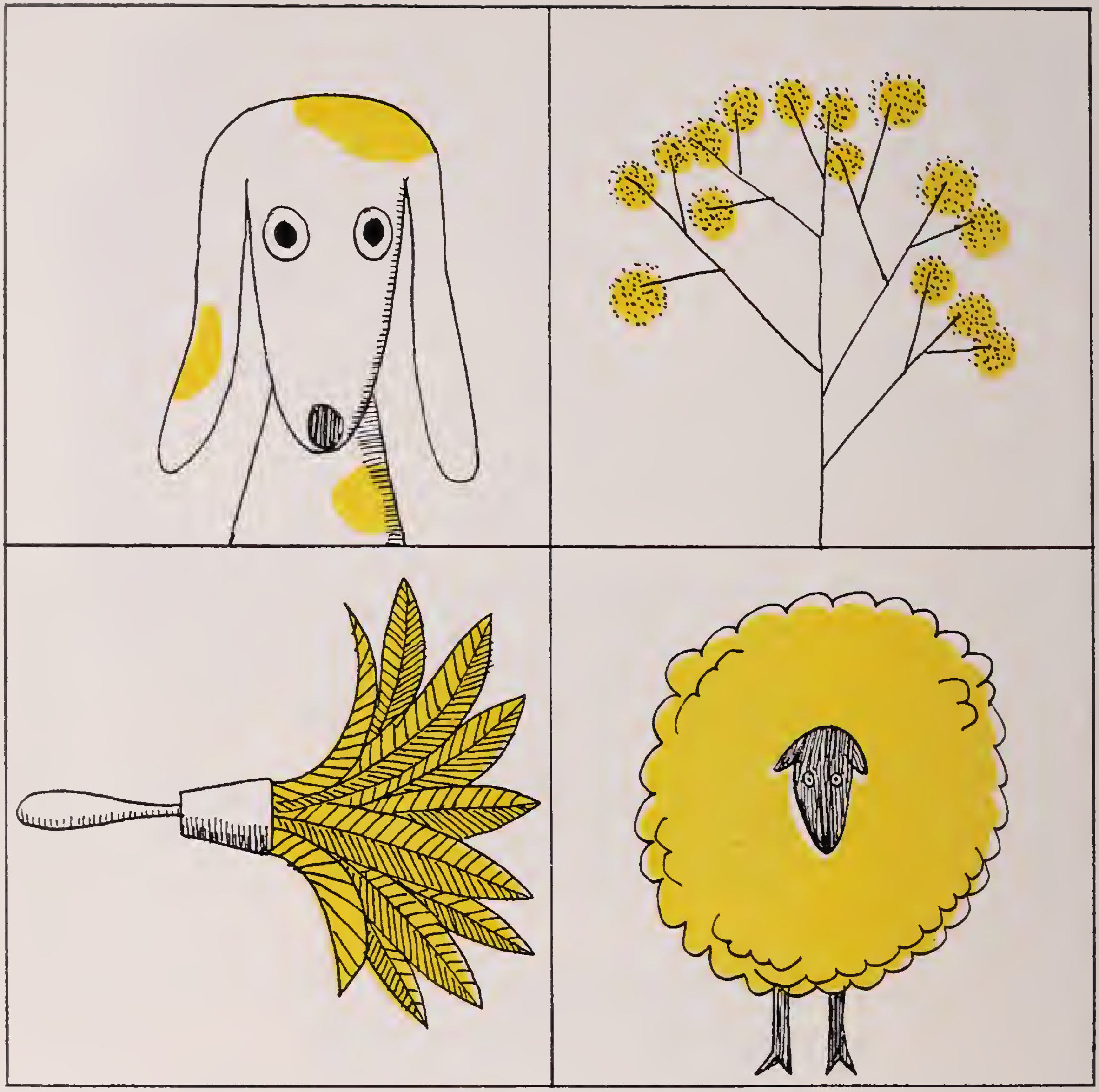

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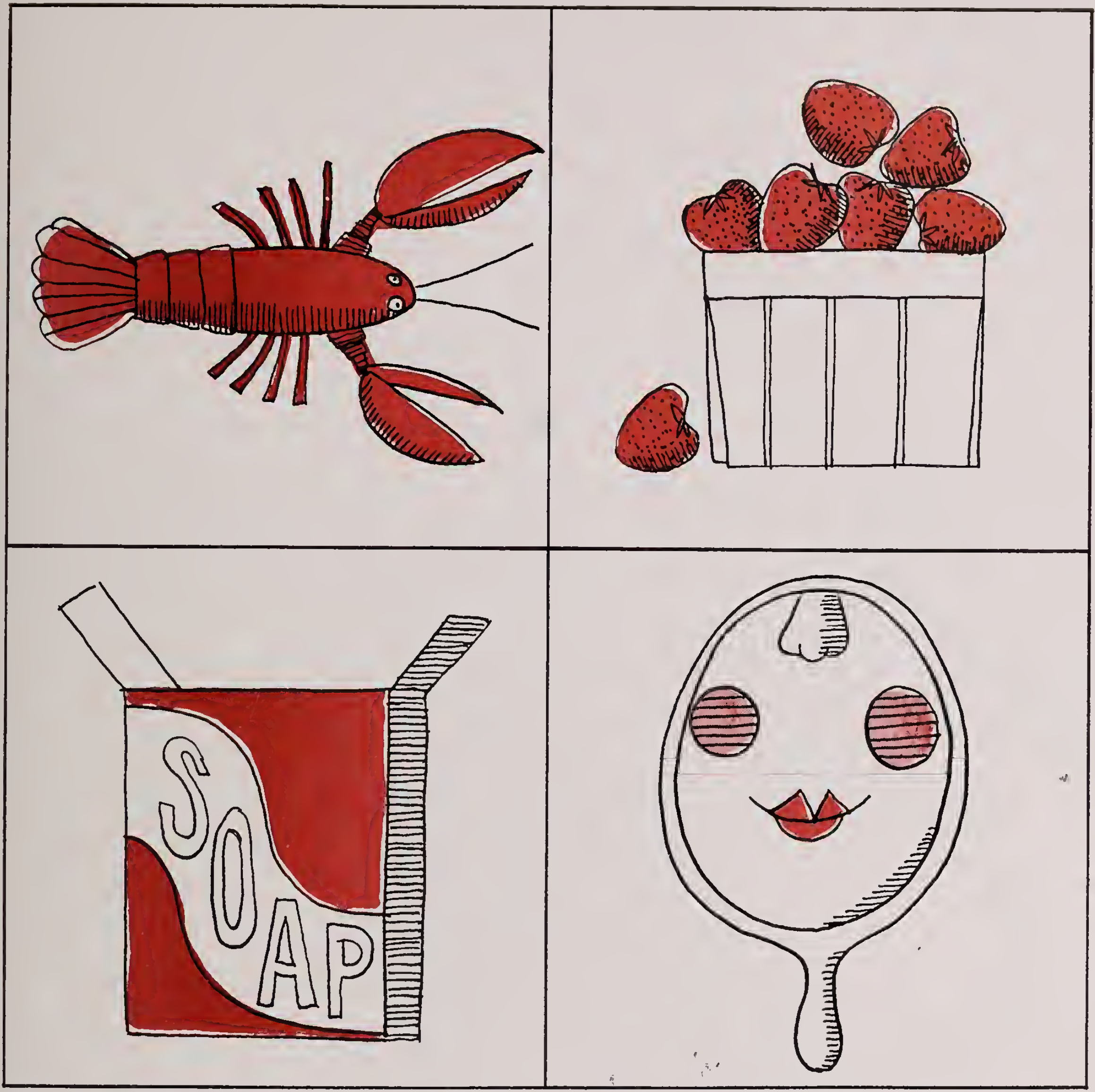

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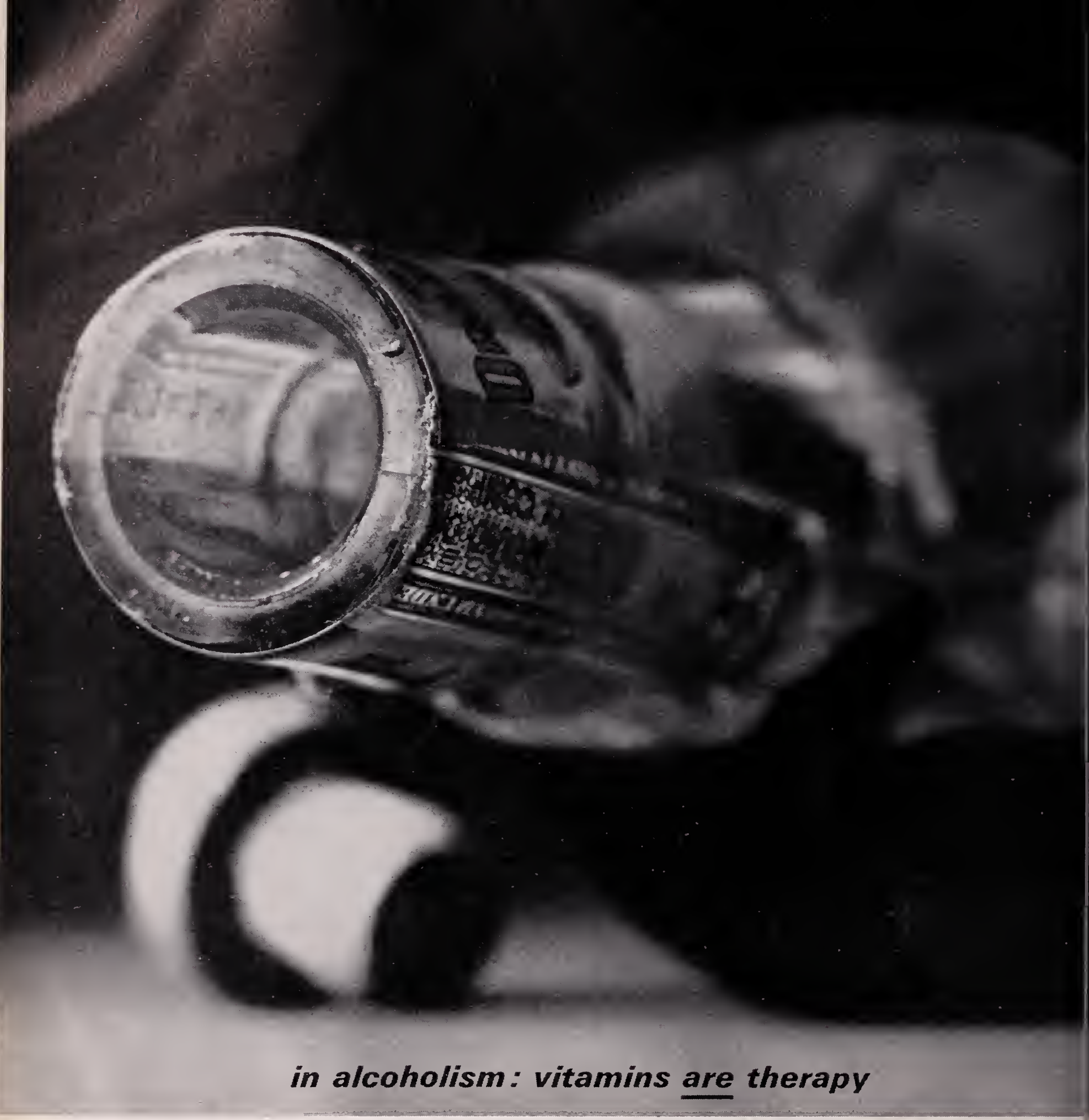

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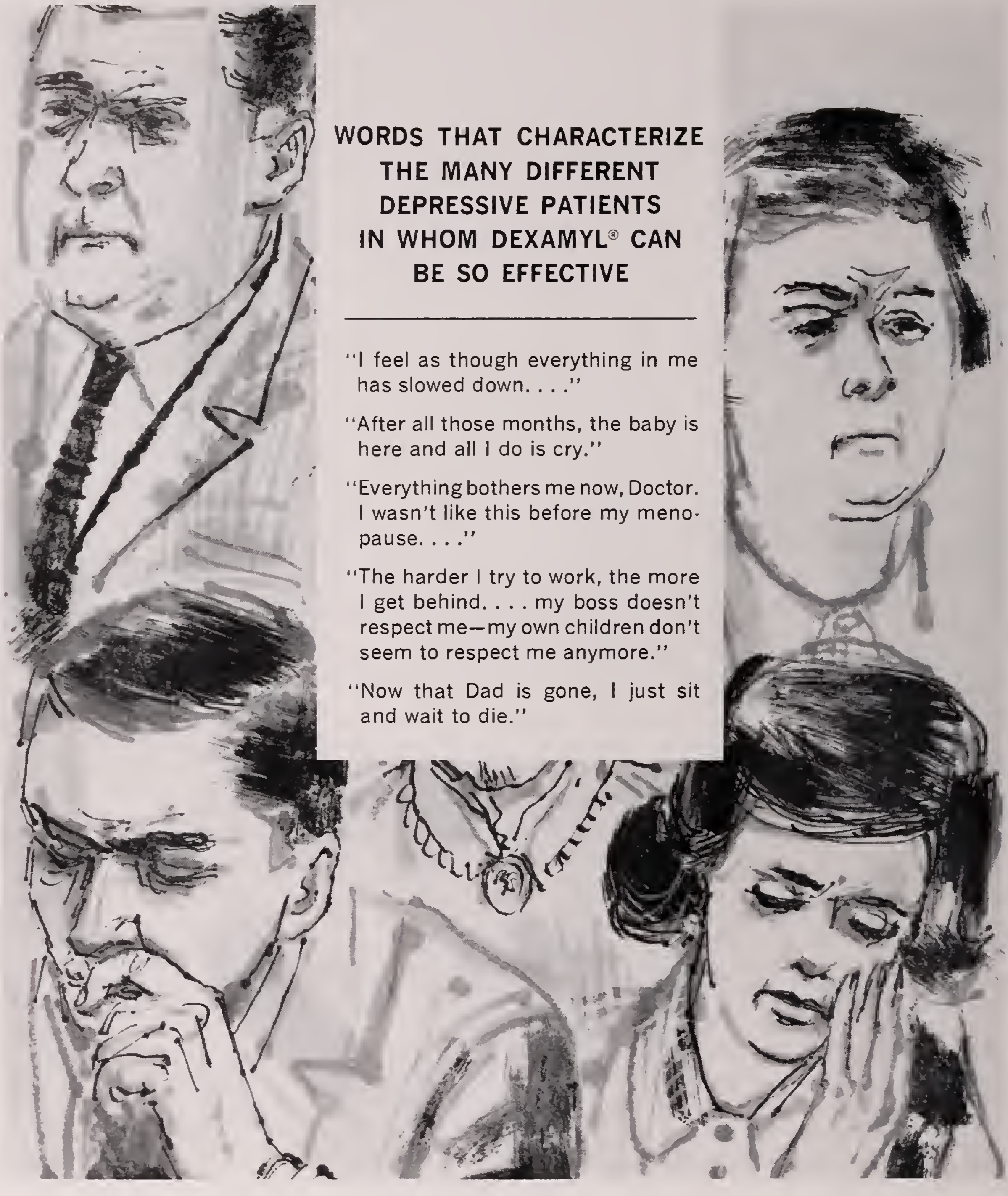

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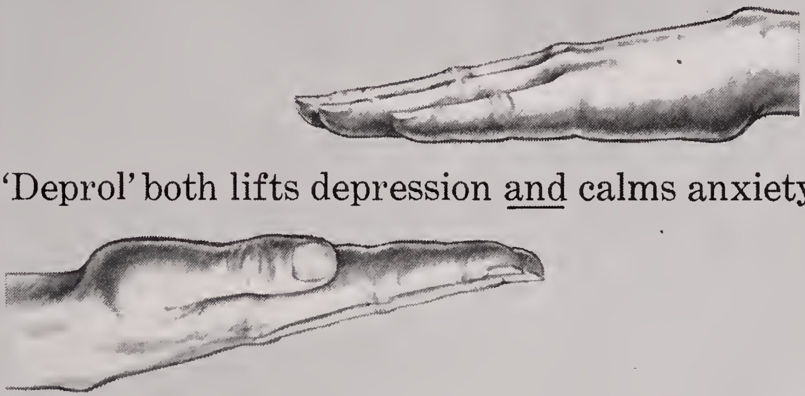

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REFERENCES: (1) Baker, A. G.: Penn. Med. J. *63*:697 (May) 1960. (2) Smith, R. T.: New York Med. (Aug. 20) 1952, pp. 16-19. (3) Smith, R. T.: Med. Clin. N. Amer. (Mar.) 1957. (4) Lehrer, H. W.; Lehrer, H. G., and Lehrer, D. R.: Northw. Med. (Nov.) 1955. (5) Sforzolini, G. S.: Arch. Ophthal. *62*:381 (Sept.) 1959.

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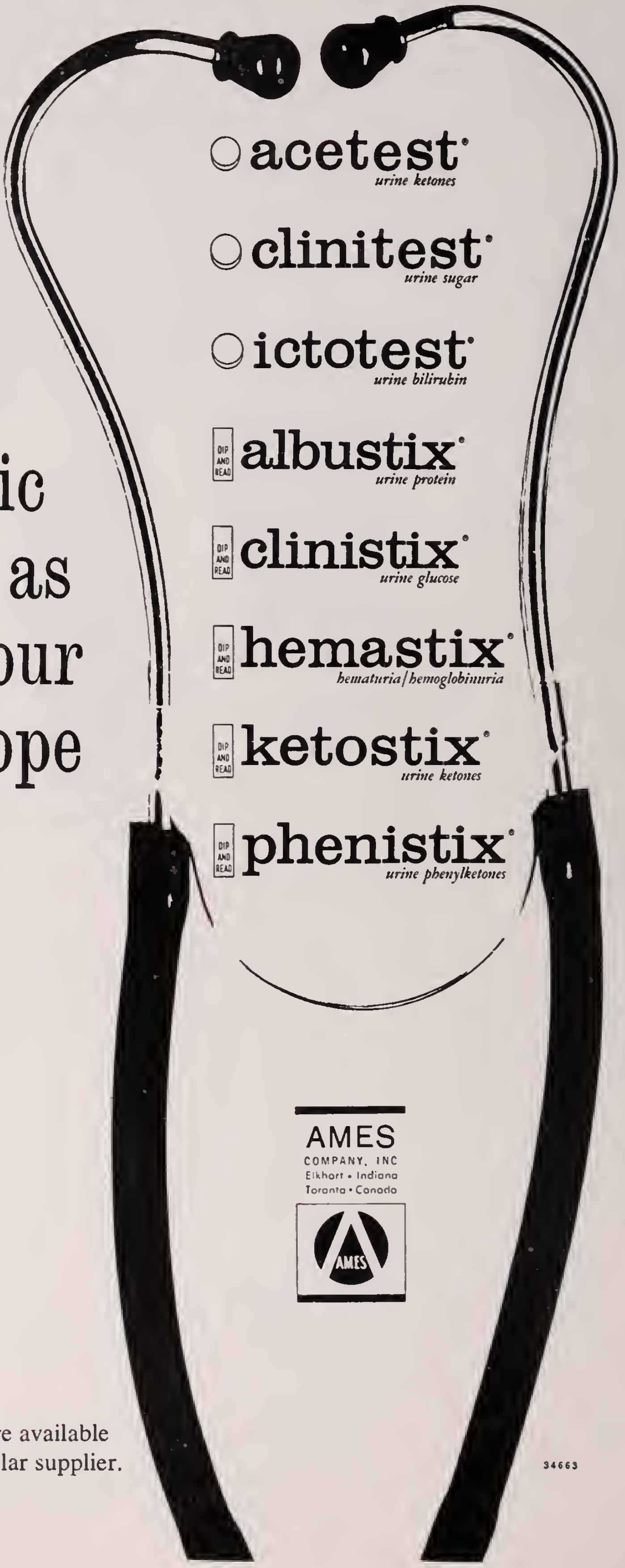

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References: (1) Clarkson, I. S., and Le Pere, D. M.: Angiology *11*:190-192 (June) 1960. (2) Kaindl, F.; Samuels, S. S.; Selman, D., and Shaftel, H.: Angiology *10*:185-192 (Aug.) 1959. (3) Kaindl, F.; Pärtan, J., and Polsterer, P.: Wien. klin. Wchnschr. *68*:186-191 (March 16) 1956. (4) Samuels, S. S., and Shaftel, H. E.: J.A.M.A. *171*:142-145 (Sept. 12) 1959. (5) Billiottet, J., and Ferrand, J.: Semaine méd. *34*:635-637 (May 20) 1958.

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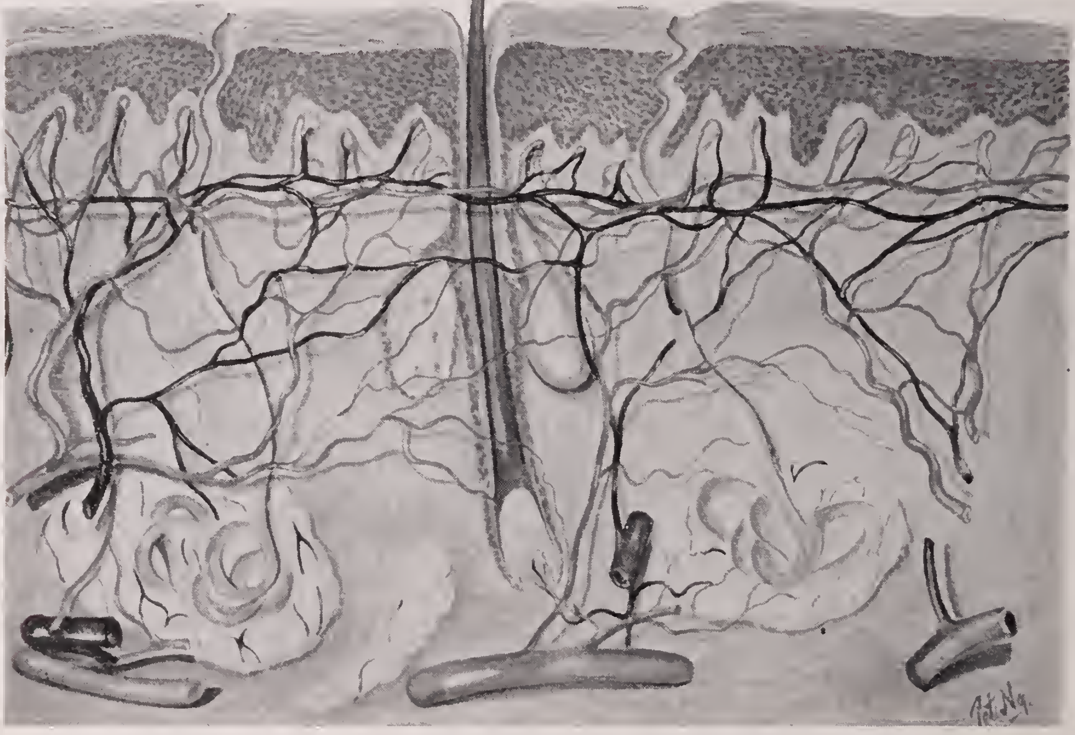

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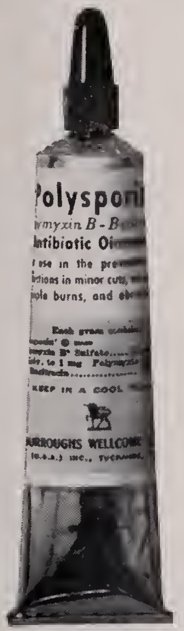

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Note: Lomotil is an exempt preparation under Federal narcotic statutes.

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Government Control of Drug Firms

Although not nationalized or socialized in the ordinary sense, the pharmaceutical industry has been captured by government. Management, still nominally in position of responsibility, is less responsible to ownership than to regulatory bureaus. Severe restrictions have now been placed around research and development of new products and promotion is under control through new rules for advertising.

The pharmaceutical manufacturer now finds his performance determined by a set of regulations rather than by a wholesome sense of responsibility to the public, to the medical profession, or to his own conscience. This may be pleasing to those who believe that changes must be made in the name of social progress—that the only way to provide modern benefits to everyone is to transfer all responsibility to government.

Before clinical investigation of a new drug may be initiated, a comprehensive statement must be filed with the Food and Drug Administration. The descriptive name of the drug must be given as well as its chemical name and structure. Method of administration must be given. If a compound, the composition must be given and any new components included must be described in detail, including source and method of preparation. There must be a statement of methods of manufacture, facilities and controls used, and description of processing and packaging.

Also with the application must go "adequate" information about preclinical work with the drug, studies utilizing laboratory animals or other work indicating safety of the new product. This must be authenticated by identification of individuals who evaluated the preclinical investigation and their qualifications for assuming such responsibility. The manufacturer must list the places at which these investigations were made and must report the place at which the records are available for inspection. If the FDA deems further information necessary, clinical trials may be ordered withheld until complete preclinical data have been provided and have been evaluated by the governmental bureau.

Five copies of the information provided to investigators must go with the application. This material must include hazards, contraindications, side effects and precautions.

The manufacturer must provide a statement of the qualifications he considers necessary for those to investigate this particular drug and must show that chosen investigators meet them. He must list the name of each investigator, his training and experience and the reasons he is considered to be able to undertake the project.

An outline of all phases of investigation must be submitted, including the time to be devoted, the number of subjects to be utilized, their age groups, sex, physical status and other data.

Periodic progress reports must be made. The FDA may stop the investigation at any time if reports indicate difficulties with a drug. Work of an investigator may be cancelled, even when already under way, if the FDA considers the investigator not expert enough.

Files of the investigator are subject to inspection by FDA representatives at any time. Investigator and manufacturer must account for all distribution of the material being investigated and these records must be in detail. Adverse side effects must be reported within a specified short period and can be the basis for an order stopping the work.

This has been merely an outline of some of the obstacles presented to the pharmaceutical manufacturers by the new regulations. There are more. It has been estimated that they will at least double the cost of developing a drug to the point of introduction to the market. This added cost will be passed to the consumer.

Adding dollar cost is, however, not the most serious effect. It is obvious that progress in development of new and improved drugs has been slowed materially. It is also quite obvious that few new substances offering great potency will get the benefit of adequate investigation if there is even a slight chance that there may be risk of important side effects linked to its potency. No sensible director of a pharmaceutical firm will gamble a million dollars on an unknown substance when bureaucratic edict can stop his work at any stage. Who, under these circumstances, would risk time and money to develop a life saving, but sometimes toxic, drug such as kanamycin?

All of this, and the multitude of frustrating details not mentioned here, may be a part of growing into the new social order, where industry and government are supposed to cooperate. It may offer some benefit but certainly not without extracting a price. It cannot be denied, however, that government has captured the pharmaceutical industry.

What industry or profession is next?

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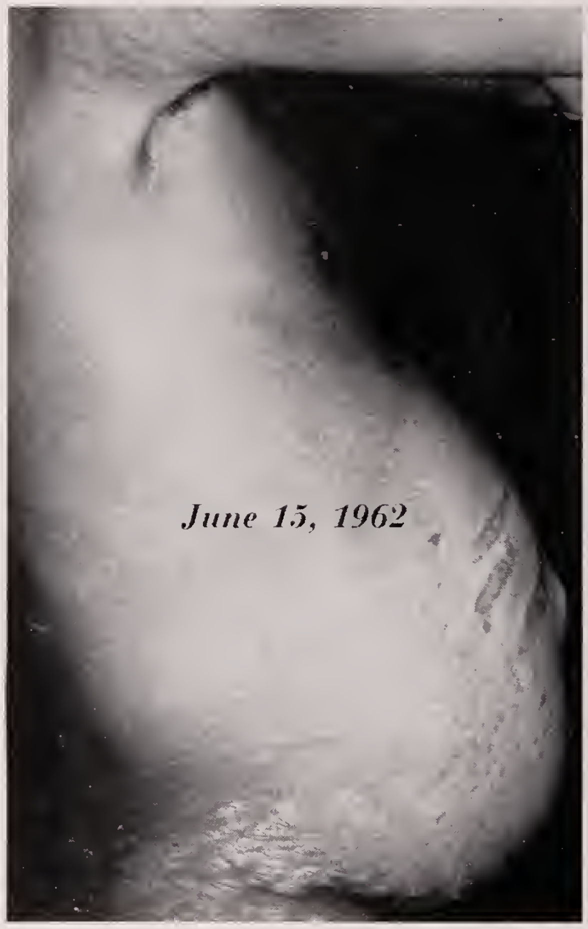
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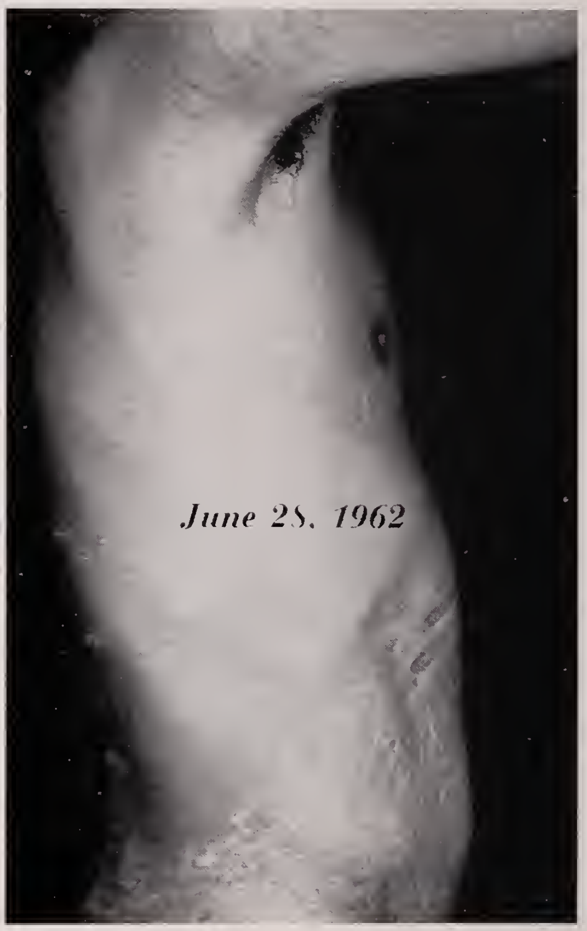
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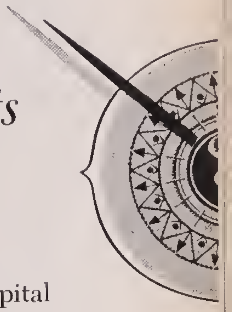

Aftercare Program for Discharged Mental Patients

WILLIAM R. CONTE, M.D. Olympia, Washington, WILLARD B. REW, M.D.
Yakima, Washington, ESSEY WOLFROM, ACSW Fort Steilacoom, Washington

Recent developments in the Washington State psychiatric hospitals provide a fertile field for application of the new policy of the American Medical Association.

The AMA, with renewed interest in mental health, now has a policy and program to support it. This development is the result of a demonstrable need for additional psychiatric services, the obvious shortage of mental health personnel, and the growing desire of the American Medical Association to cooperate with other agencies and services bringing help to the mentally ill.

concepts

Basic concepts of the new policy are the outgrowth of the planning conference held in Chicago in September, 1961, and the First National Congress on Mental Health sponsored by the American Medical Association which took place in Chicago in October, 1962. Briefly stated, the program is broad and covers psychiatric services, training and research in the whole mental health field. Emphasis is placed on necessity for the medical profession to support both state and private psychiatric services and to become cooperatively involved in the several highly specialized aspects of the practice of psychiatry as they reflect individual patient needs.

Coincident with the awakening of interests on the part of the medical profession, the public has become concerned over state psychiatric hospital programs. In Washington, for example, the last several sessions of the legislature have produced appropriations which come close to meeting the basic needs of a good state hospital program.

These monies have made possible the acquisition of much needed, high level, professional staffs with the result that the programs which have been developed are of high quality and are accredited by the Joint Commission on Accreditation.[1] One practical result is that the patient population in the hospitals has diminished appreciably as a result of 300 discharges every month.

problems remain

In an earlier paper we reported on the relationship between the state hospitals and the medical profession with special emphasis on the matter of referrals, medical supervision in follow-up, and support of the program by the state medical society.[2] The problems in aftercare of the discharged patient have, nonetheless, remained pressing. Most importantly, there is the magnitude of the problem of finding medical supervisors for 300 patients each month. Then too, many of the needs of the patient go beyond the realm of medical responsibility. These are such things as nursing care needs, vocational rehabilitation and training programs, guidance and counseling efforts, and assistance with special problems at home, at school and in the church. While services to meet these needs have been in evidence for a long time, there has not been coordinated effort through which they might be brought to bear on our problem.

the plan

In collaboration with leaders in both medical and nonmedical fields, the Division of Mental Health, Department of Institutions, has established a series of Hospital-Community Councils to serve the needs of patients discharged from each of the three state hospitals.

Dr. Conte is Supervisor, Division of Mental Health, Washington State Department of Institutions. Dr. Rew is Past-President, Washington State Medical Association and member of the Division-Community Council. Miss Wolfrom is Chief of Psychiatric Social Work at the Mental Health Research Institute and Coordinator of the Hospital-Community Council program.

The purpose of these councils is to facilitate a coordinated aftercare program for the discharged patient. Representation on the councils comes from the many service groups which might be called upon to assist the discharged patient. Some of these are as follows: State Medical Association, Committee of Psychiatrists for Community Action, Superior Court Judges' Association, State Mental Health Association, Law Enforcement, Council of Churches, State Recreation Society, State Nursing Home Association, and the following State Departments: Health, Public Assistance, Employment Security, Division of Vocational Rehabilitation, Labor and Industries, State Parks and Recreation.

Aftercare may be defined as any service which promotes the adjustment of the discharged patient as he starts life anew in his community. In several states it has been shown quite conclusively that, where aftercare programs are utilized, readmission rates can be reduced to as much as 10 per cent of all discharged patients.[3] Providing services to maintain the ex-patient in his community is both humanitarian and practical, and usually costs only about one-tenth of the hospitals' per diem rate. This, of course, does not take into account savings to the state through change from dependency of illness to independence due to adjustment of the ex-patient who is employed and continues to be economically self-sufficient. It also does not consider the gains in human dignity for the individual who is able to maintain himself as a self-supporting, taxpaying citizen of his state.

variable needs

Aftercare programs vary from state to state and there seems to be no one program or any one solution which would meet the needs of every state. Two findings in a large five-state study, involving Colorado, Kentucky, Michigan, Pennsylvania and Virginia, made in 1959 are as follows:

1. Procedures must be adapted to the individual state or hospital situation. In other words, programs cannot be standardized for all states, but must be tailored to fit.

2. Aftercare programs must be integrated with the community and the community resources.[3] Currently many states throughout the country are experimenting with ways to provide new aftercare programs or to improve already existing services.[4]

Rationale for development of an aftercare program in Washington is increasingly clear from a Washington survey in which it was shown that, of 126 state hospital patients discharged, 23.8 per cent could have benefited from services of the clergyman, 39.6 per cent from the services of the public health nurse, and 21.4 per cent from education at vocational rehabilitation and training centers.

In its present program the Division of Mental Health has embarked upon a two-year demonstration project to work with communities in the implementation of a sound solution to the needs of patients from all of the three state psychiatric hospitals. With the help of a grant from Smith, Kline and French Laboratories, four councils are established: One for the Division as a whole and one for each of the three hospitals. The project started in May, 1962, and will continue at least until May of 1964. This paper is something of a progress report of the early months of operation of the project.

goals

The Division-Community Council concerns itself with problems on a statewide basis while each of the Hospital-Community Councils concerns itself with problems within the geographical area served by the hospital. The specific goals of the councils are:

1. To study and evaluate the hospital-community needs of patients and their families before admission, during treatment and during rehabilitation;

2. To make recommendations for meeting these needs;

3. To plan, advise and implement methods for improving statewide coordination of services.

In selecting the membership for the councils, an attempt was made to gain participation from all segments of community services. In no way does the Division's interest in the development of the Hospital-Community Councils imply that services at the community level have not existed. Rather, it is to provide a method of increasing communications among those already serving the psychiatrically ill and recovered, to recognize new needs and develop services which could be expanded. It is hoped that this will aid in continuing the "de-isolation" of the traditionally isolated state hospitals and to assist the hospitals to come into the society of other community services with a goal of reducing rates of readmission, providing more meaningful services after hospitalization and enriching services available to families and patients before and during hospitalization.

Incorporated in the planning is an evaluation at the end of the two years. The state coordinator of the Division-Community Council will be responsible for directing this evaluation of the project and its effectiveness. It is anticipated that the evaluation will be largely a descriptive and subjective one involving the participation of the council members, hospital staffs and other appropriate community agencies and practitioners.

anticipated gains

It is understood that, with overwhelming needs, the small Hospital-Community Council cannot hope to find a solution to the problem, but it is anticipated that this effort will point to the following potential results:

1) Improved communication between the hospitals, the medical profession, and the several professional groups involved in aftercare services. 2) Reasonable cooperation between community services which may lead to increased efficiency in the utilization of community services. 3) More clearly defined medical leadership in the coordination of services to the psychiatrically ill.

summary

Recent developments in Washington State psychiatric hospitals provide a fertile field for application of the new policy of the American Medical Association. The AMA policy emphasizes the obligation of the medical profession to support both state and private psychiatric services and to become cooperatively involved in the several highly specialized aspects of the practice of psychiatry as they reflect individual needs.

In collaboration with leaders in both the medical and nonmedical fields, the Division of Mental Health, Department of Institutions, has established a series of hospital-community councils to serve the needs of the patients discharged from each of the three hospitals. One council is a state level planning committee. The other councils relate the individual hospital to its community, i.e., to its area of referral. The purpose of the council is to facilitate a coordinated aftercare program for discharged patients. Representation on the councils comes from the Medical Association, the Judges' Association, the Bar Association, and many nursing, social work, and health organizations and facilities.

This new effort is a two-year demonstration program supported by help from Smith, Kline and French Laboratories. The specific goals of the hospital-community councils are:

1. To study and evaluate the hospital-community needs of patients and their families before admission, during treatment and during rehabilitation.

2. To make recommendations for meeting these needs.

3. To plan, advise and implement methods for improving statewide coordination of services.

It is anticipated that this new effort will provide improved communication between the hospitals, the medical professions, and several professional groups involved in aftercare services. ■

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Use of Steel Wire Sutures for Closure of Abdominal Wounds

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Experience with a variety of celiotomy techniques has provided a basis for presently favoring broad base fascial approximations by stainless steel wire for the closure of most major abdominal incisions. This particular approach in management of abdominal wounds is not new, having been advocated in the past by Jones et al, Coller and Ransom, Wiley and Sugarbaker, Walton, and others, but acceptance of the technique in this country has been limited.[1-4]

It is believed that stainless steel wire sutures have certain outstanding advantages when employed in the closure of abdominal wounds, and that the principles underlying the coaptation of essential fascial layers by mass sutures of steel wire deserve further consideration. Results of steel wire fascial suturing in 324 major abdominal operations performed during a nine year period are presented to support this point of view.

basic techniques

To appose the peritoneal and fascial layers of transverse abdominal incisions, a type of buried through and through suture of No. 30 monofilament stainless steel wire, generally known as the "Tom Jones figure of eight",[1] has proven very effective (Fig. 1). The technique consists in the application of far-near mass sutures of steel to obtain approximation of the peritoneum and abdominal fascias as a unit. The smooth peritoneal closure accomplished by these sutures can be readily checked digitally at the time of operation, and the edges of the abdominal aponeurosis are seen to come together solidly. The degree to which the abdominal muscle layers are joined is variable, but exact muscular approximation is not important.

While, in general, transverse incisions lend themselves best to en bloc fascial closure by steel wire, midline incisions are also closed readily by wire sutures. In the upper midline, the fibrous linea alba is brought together solidly by No. 30 stainless steel wire sutures of on-end figure of eight type (Fig. 2). The wires may include the peritoneum with aponeurosis; but, when there is a heavy layer of properitoneal fat, the peritoneum is usually closed separately by fine sutures of chromic catgut or silk. After the wires have been tied, their closely cut knots are turned down directly into or beneath the line of fascial approximation. Sutures may also be inserted and tied so their knots are set immediately beneath the fascia.

Since deeply placed stainless steel wires operate as permanent buried retention sutures, stay sutures are not used. Skin closure has been carried out ordinarily by interrupted sutures of silk. Rarely, in the presence of contamination, a small subcutaneous drain has been left in the wound for a day or two. When peritoneal drainage has been indicated, drains have been inserted through counter incisions.

It should be stated that mass sutures of wire have not been used in young subjects and have not been applied in the closure of modest muscle splitting incisions of McBurney type. Groin hernias have been repaired by layer techniques, usually employing silk sutures, but occasionally using sutures of No. 34 stainless steel wire.

Wound closure by mass sutures of No. 30 stainless steel wire is useful after a secondary celiotomy has been carried out through a field in which abdominal wall layers are ill defined and obscured by scar. This method is also applicable in operative correction of all varieties of ventral hernia, and mattress sutures of finer wire have been employed for fixation of fascia lata sheet transplants in adjunctive repair of massive abdominal wall defects. Early ambulation has been practiced in the management of all patients whose abdominal incisions have been closed by stainless steel wire technique.

results

From 1954 to 1963, en bloc approximation of peritoneum and abdominal fascias by stainless steel wire sutures has been employed with increasing frequency. At first, the technique was reserved for cases in which postoperative incisional difficulties were anticipated. These were cases complicated by bowel obstruction, periton-

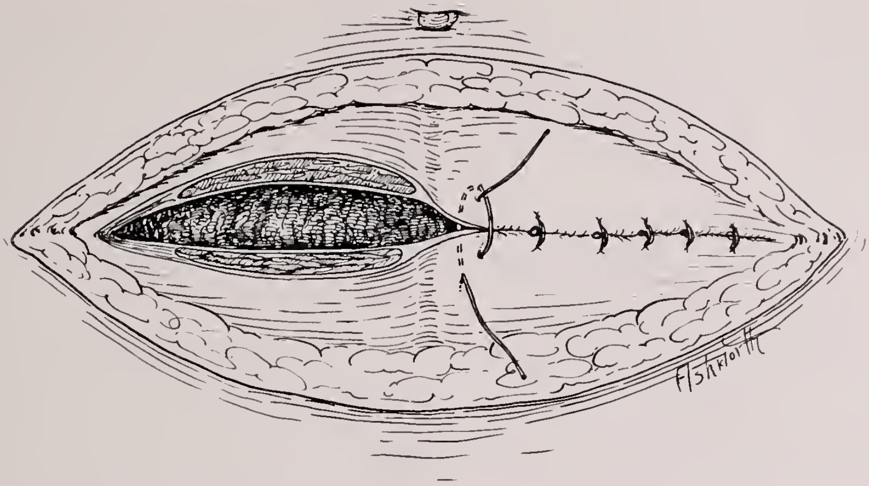

Fig. 1. Closure of transverse incision by far-near sutures of monofilament stainless steel wire. Sutures are inserted about three fourths of an inch apart, and include musculofascial layers and peritoneum. Suture knots are turned below the level of the aponeurosis in the line of the incision.

itis, malignant disease, obesity, or chronic cough. More recently, because results had been good under unfavorable conditions, unit closure of peritoneum and musculofascial layers has been extended to clean and uncomplicated cases. Application of the method in 324 cases (Table 1) has been followed commonly by strong healing of the abdominal wall, and there have been few technical difficulties.

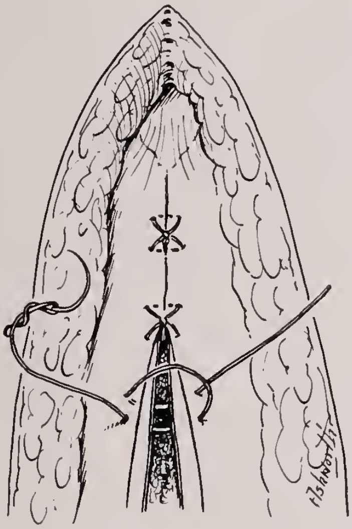

Fig. 2. Closure of upper midline incision using monofilament stainless steel wire sutures. A solid aponeurotic approximation along the linea alba is accomplished by a single row of sutures of on-end figure of eight type. Suture knots and wire ends are turned in.

It had been thought that the presence of wire sutures in the abdominal wall might increase patient complaints of wound pain. This has not been the case. Rare wire suture removals in the present experience have been required for entirely objective reasons, such as the projection of improperly inverted wire ends, or a persistent wound sinus in a case contaminated by pus or bowel content at the time of operation.

Table 1

Steel Wire Closure of Abdominal Incisions
1954 - 1963

Surgical Area	Type of incision Transverse	Oblique	Vertical	Complications
Upper gastrointestinal	17	0	138	5
Biliary tract-pancreas	26	31	4	0
Trauma to solid viscera	4	1	2	0
Lower gastrointestinal	67	0	0	3
Pelvis	4	0	7	0
Hernia	3	4	16	0
Totals	121	36	167	8

Among the cases treated with stainless steel wire, there have been no instances of wound dehiscence, although in three patients incisional weakness has permitted a bulge of small size to develop within a year after operation. This untoward result was observed following surgical procedures on the stomach through upper midline incisions. In each of four contaminated cases, a single intact steel suture had to be removed from a transverse incision to obtain healing of a draining sinus; but in these patients, wound healing was finally solid. In another case, an adventitious staphylococcal infection in an upper midline incision was managed without suture removal, and with no residual wound weakness.

steel as suture material

At the present time, great divergences of opinion exist with regard to all aspects of abdominal wound management. In line with the principles set forth by Halsted,[5] layer approximation of the peritoneum and fascias by relatively fine sutures of silk or cotton is probably the most generally accepted method of abdominal wound closure. A large number of surgeons prefer chromic catgut for the closure of abdominal incisions, however, and new synthetic suture materials are becoming popular. In many centers, monofilament stainless steel wire, as introduced to surgical use in this country by Babcock in 1934,[6] still finds favor as the basic fascial suture in the closure of abdominal wounds.

Stainless steel is an alloy, and wire of this material is quite flexible. The security of a stainless steel wire knot depends on friction factors developed by stretching and roughening of the normally smooth wire as the knot is tied.[7]

The solid setting of a stainless steel wire tie may be demonstrated readily in a "dry" experiment in which the suture is tied in a square knot at a predetermined point. Such a knot will come down so firmly that no further slipping of the tie can be induced manually by the operator. This surgical virtue of stainless steel wire counts heavily on the side of safety in abdominal wound closure, tending to prevent undue and unintentional tightening of mass sutures, and tissue strangulation. The ease with which a firm square knot may be set using monofilament stainless steel wire stands in contrast to the less predictable tying qualities of some of the synthetic sutures now being proposed.[8,9]

At the present time, many of the objections to use of stainless steel wire sutures have their basis in operator inconvenience and the possibility of unfavorable patient reactions. Surgeons have complained that tying of wire sutures makes their fingers sore, and that wire ends have punctured their fingers as well as their gloves. It must be granted that special care is necessary in handling steel sutures. It should be pointed out, however, that when en bloc approximation of the abdominal fascias is carried out using steel wire, there are considerably fewer sutures to tie than in a conventional layer closure. Patients have complained at times about the projection of wire ends against the abdominal skin, but this complication can be obviated almost completely if suture ends are turned in well after tying.

public acceptance

Unfavorable psychological response in a patient being informed at a late date of the radiographic finding of steel wire in his abdominal wall has been considered as a possible undesirable sequel to the employment of wire technique. In view of the long and extensive use of steel wire sutures, in this country and abroad, and the apparent complete acceptance by the public of employment of more elaborate internal stainless steel and plastic splints in other surgical areas, medicolegal repercussions should not be anticipated when stainless steel wire is used for abdominal wound closure. A late unfavorable psychological reaction on the part of a patient, in whom steel sutures have been employed, may be avoided if he is told frankly and as early as possible that his incision has been closed with stainless steel wire sutures, and the rationale of the method explained.

Grindlay[10] has suggested that individuals with metal implants in their bodies may suffer pain on contact with radar or microwaves, but experience of the United States Navy does not support this hypothesis. To date, serious difficulties related to dental prostheses of metal have not been reported by naval personnel engaged in operation and maintenance of radar equipment.[11] Therapeutic application of diathermy might appear to be contraindicated in patients whose wounds have been closed with steel wire sutures. Experiments have indicated, however, that diathermy treatments of average duration and intensity should not produce any untoward clinical effect.[12]

applications of mass suturing

As a mass approximating suture, monofilament stainless steel wire would appear to be outstanding among the materials available for use at this time. Buried stainless steel sutures excite little local inflammatory reaction, and reactive swelling of tissues enclosed in a properly set wire suture should be mild. It is thought that the double loop characteristic of figure of eight and far-near sutures operates to prevent tissue strangulation by distributing suture pressure against a relatively large tissue mass. Although new braided and twisted wire sutures are being introduced, stainless steel monofilaments are still preferred, as being free of suture crevices which might harbor infection in a contaminated surgical field.

Mass approximations of the peritoneal and musculofascial layers by wire sutures have been most efficacious in the management of transverse and oblique abdominal incisions. As has been emphasized by Singleton and Blocker, Gurd, Coller and his associates, Boyden, and others, there is little disturbance of innervation when an incision of transverse type is made, and the pull of the flat muscles tends to draw the wound edges together rather than to distract them.[13-17] In the closure of a transverse incision, the surgeon deals with substantial fascial layers having an excellent blood supply.

In vertical midline incisions in the upper abdomen, employed for ready exposure of the stomach and lower esophogus, closure by on-end figure of eight wire sutures has not been entirely effective. Late minor wound weaknesses have been observed. In upper midline incisions, respiratory movements probably induce some fascial cutting by the wires. Lower midline incisions closed with steel wire have shown uniformly good healing, and wire closures of vertical secondary incisions through the rectus sheath have worked well. Primary vertical incision through the rectus sheath has been avoided, in the recognition that unfavorable anatomic factors operate when this surgical approach is employed.[18]

It is believed that there is a place for buried en bloc wire sutures in the treatment of abdominal wound ruptures. Under certain adverse general conditions, particularly when there is uncontrolled abdominal distention, vomiting, or cough, incisional dehiscence may occur in spite of all local technical precautions. Secondary closure of the abdomen in these cases has generally been accomplished in the past by use of heavy removable sutures inserted through all layers of the abdominal wall. Frequently such sutures have produced little apposition of essential fascias, caused painful cuts in the skin and, though left in place for long periods of time, have not prevented late herniation. In some instances of incisional rupture, complicating infection is not present, and the abdominal aponeurosis is found to be in relatively good condition. In a situation of this kind, employment of buried wire sutures of mass type, with continued attention to complicating systemic disease, may effect a permanent correction of the incisional defect and substantially reduce the patient's postoperative discomfort.

Mass suturing avoids many small manipulations of tissue, all traumatic in some degree, which are incidental to any conventional layer closure. While relatively large loops of wire are left, of necessity, in wounds closed by mass sutures, stainless steel has been shown to be almost completely lacking in tissue reactivity, and is quite superior in this respect to catgut, cotton, silk, and many of the synthetics. When all of these factors are considered, there would appear to be some basis for believing the net postoperative inflammatory reaction in a wound closed by mass sutures of steel is probably much less than that which occurs in most layer closures by one of the more common suture materials.

It is recognized that, in time, steel sutures may work harden in the abdominal wall and fragment. It is believed that the potential hazard to the patient in this event is not great. Wire used for abdominal wall closure is of small caliber and has been so looped and tied that there should be little tendency to intra-abdominal displacement. If disruption should occur early in a wound closed with wire, the sutures might be expected to cut through the tissues but not to be broken. If an acute evisceration should occur, wire sutures in the wound should represent no more of a risk to prolapsing intestine than other nonabsorbable suture of comparable size and configuration.

summary

A case is made for the efficacy of mass sutures of monofilament stainless steel wire in the closure of abdominal wounds.

Stainless steel wire sutures are outstanding in their biological inertness, their tensile strength, and the security with which they can be tied.

Buried stainless steel wire sutures of far-near type, approximating all tissues of the abdominal wall from the subcutaneous layer to the peritoneum, have been very effective in the primary closure of transverse and oblique incisions and in some secondary closures of vertical wounds within the rectus sheath. On-end figure of eight sutures of steel wire have been used for fascial approximations in midline incisions. This tech-

nique has worked well in the lower abdomen but, in the upper abdomen, the end results have been less favorable. ■

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Perianal Verruca Acuminata with Mucosal Lesions

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Verruca acuminata, also known as condyloma acuminatum or, incorrectly, *venereal warts*, develop on moist tissues near the mucocutaneous junctures. These formations consist of closely aggregated, tufted or pedunculated, flesh-colored projections of variable length and consistency. About the vulva, beneath the foreskin, or about the anal area they may vegetate, become secondarily infected, and odoriferous from the macerated epithelium and decomposing secretions. They are autoinoculable, seldom disappear spontaneously and are transmissible to the sex partner. Despite such transmission, the disease should not be considered venereal. All types of verrucae are thought to be of viral etiology.

The fact that condyloma acuminata may be implanted on the rectal mucosa beyond the mucocutaneous junction is often overlooked. We could find only one reference to this fact in the medical literature in a survey over the last twenty years.[1] A review of several popular surgical and proctological texts, revealed only one reference to this observation.[2] The symptoms of perianal warts, objective and subjective, give no clue to the concomitant presence of mucosal lesions. Frequently, such undetected mucosal lesions are responsible for the recurrence of verrucae on the perianal skin and, therefore, explain failures of podophylin treatment of the glabrous skin lesions alone. In view of this, we have routinely performed proctoscopy on all patients with perianal condylomata to be assured of eradicating the problem as completely as possible in one surgical procedure.

increasing incidence

Over the last two years, we have found eight instances of condylomata on the rectal mucosa. Figure 1 demonstrates the typical appearance of

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From the Virginia Mason Hospital and Mason Clinic, Seattle.

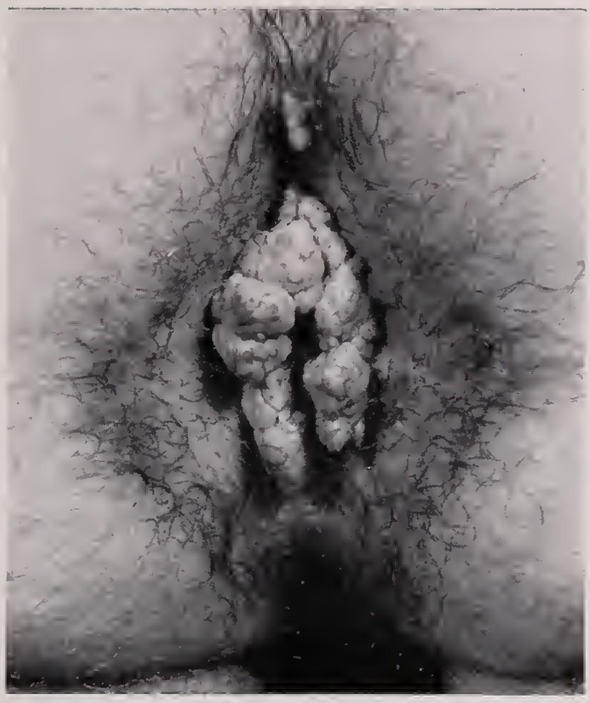

Figure 1. Typical appearance of perianal verruca acuminata (associated with rectal mucosal lesions).

such a case. Seven of these were male and one female; three of the former had lesions on the genitalia also. This appears to represent an appreciable increase in incidence, in our experience, and one might conjecture whether this might be related to the alleged increased incidence of homosexuality in our society. The patients were all in the second or third decade of life and only two of the eight were married. The one exception to this age group was a boy of two years. There was no question of sodomy raised in the histories taken on any of the patients.

All patients were treated under spinal anesthesia by the Department of Surgery with electrodesiccation under direct view with a proctoscope. Large verrucae are excised, using sharp dissection with a scalpel. The residual verrucae both above and below the dentate line are cauterized radically, under direct vision, with a bright light. The anus is dilated to three fingers at the end of the procedure and is dilated during the postoperative period to eradicate stenosis, which has been present in about fifty per cent of the cases. This also prevents development of a stricture following surgery. Postoperative examinations should be at brief, frequent intervals, so that possible recurrences can be promptly detected and, therefore, more easily treated.

Despite removal of all visible verrucae, there have been several instances of recurrence which necessitated repeat electrosurgical removal. When the recurrences are limited to the perianal skin, these are treated with the local application of podophyllin. It is postulated that these are not truly recurrences but, rather, lesions which were present at the time of the initial procedure but were perhaps too small to be observed at that time. Those cases without mucosal involvement were all successfully treated with podophyllin, applied locally in the Dermatology Department.

summary

In the last two years, eight cases of condyloma acuminata of the rectal mucosa were found in cases of perianal condyloma acuminata. These cases were not effectively treated by local measures, and, therefore, became a surgical problem. In our opinion all cases of condyloma acuminata of the perianal skin should receive the benefit of proctoscopic examination before local therapy is instituted. ■

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Pulmonary Physiology in Clinical Practice

V. Arterial Blood Gas Analysis

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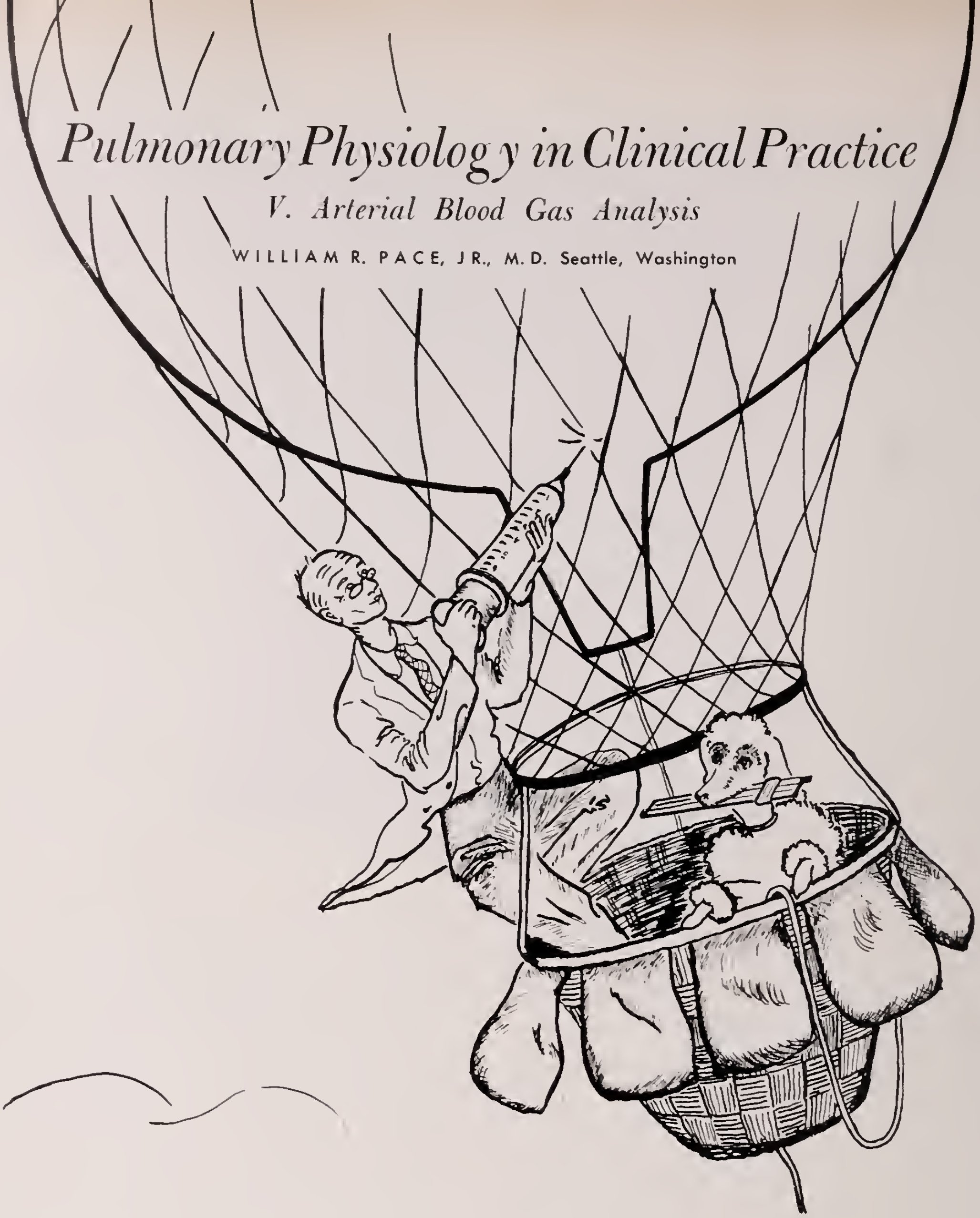

The preceding article of this series described several practical clinical methods of measuring ventilatory function, and discussed means by which interpretation of these measurements might direct diagnostic suspicion toward *abnormal ventilation-perfusion ratios*, *arteriovenous shunts*, and *membrane permeability impairment*.

Actual *confirmation* of alteration in one or more of these last three areas, unfortunately, cannot always be accomplished by methods as simple and direct as those which measure ventilatory function. Most ventilatory defects of clinical significance may be detected, and the extent of impairment may be fairly accurately estimated, with simple instruments which are readily adaptable for use by any clinician. But the assistance of the more specialized laboratory is needed to obtain information about gases "on the other side" of the alveolar-capillary membrane.

From the Cardio-Pulmonary Laboratory, Providence Hospital Heart Center, Seattle.

source of sample

To determine the condition of blood which has just passed through the lungs, one must study blood from the systemic arterial circulation. For obvious reasons, venous blood which has returned from the *tissue* capillaries cannot be used to determine the concentrations or partial pressures of respiratory gases present in blood as it leaves the *pulmonary* capillaries.

Fingertip capillary blood is sometimes used as a substitute for arterial puncture, on the thesis that at the capillary level the greater pressure will be from the arteriolar side and therefore blood which oozes up from a superficial puncture wound will necessarily be from the arterioles rather than from the lower pressure areas of the capillary bed or the venules. In actual practice, however, capillary blood sampling is useful only in detection of fairly gross changes in blood oxygenation, and is not reliable for obtaining more precise information.

technique of sampling

Puncture of the brachial or radial artery is the most widely used method of obtaining arterial blood for analysis. The *Cournand* needle may be used for this purpose. This instrument consists of a blunt-end canulla and a sharp-pointed, hollow needle of slightly smaller diameter. When assembled, the needle fits inside the canulla, with the needle point extending just outside the opening at the distal tip of the canulla. After the artery has been punctured the needle may be withdrawn and replaced with a stylet, leaving the canulla in place in the vessel. Samples are obtained through the canulla by removing the stylet. A guard at the proximal end of the canulla supports it at a slight angle to the skin surface when the canulla is taped in place.

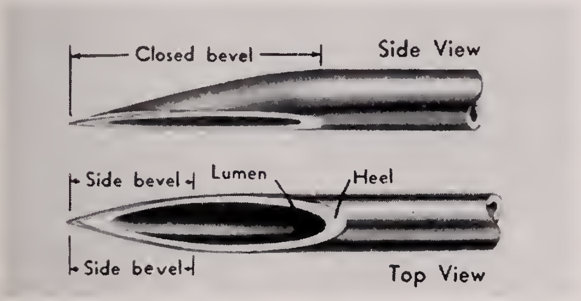

Fig. 1. Huber needle. Illustration courtesy of Becton, Dickinson and Company.

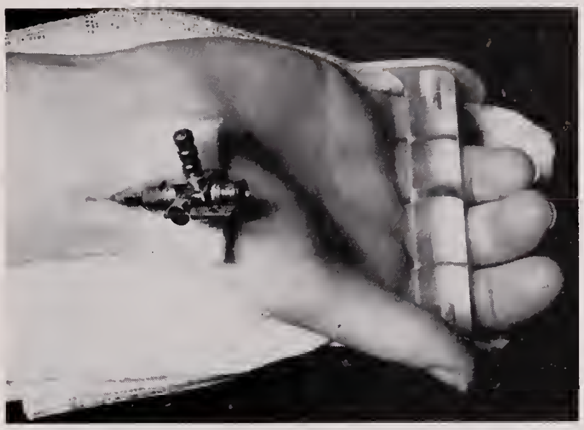

Fig. 2. Arterial puncture. Needle in place in radial artery, with stopcock attached.

I prefer to use a 20-gauge *Huber* needle which has a closed bevel. It is inserted bevel up, and opening down, facing the lumen. It remains open when the hub is depressed. Due to its flat opening, it is not easily plugged with tissue during insertion (Fig. 1).

Before the puncture, the skin, subcutaneous tissue, and adventitial wall of the artery are infiltrated with 1 per cent procaine. The needle is attached to a three-way stopcock and fitted to a syringe containing heparin solution. When the needle is in place in the lumen of the vessel, enough heparan is injected from the syringe to fill the dead-space of the needle and stopcock assembly. The stopcock is turned to the closed position and the syringe removed (Fig. 2).

Syringes for taking blood samples are prepared by rinsing with heparin solution and filling to the 0.5 to 1 cc mark with a mixture of heparin and sodium fluoride. (The latter compound is added for its preservative effect.) A syringe so prepared is fitted to the stopcock

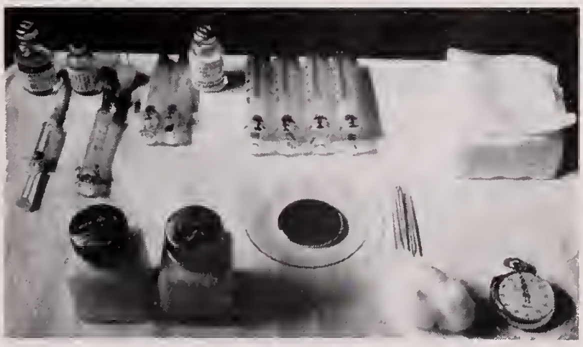

Fig. 3. Equipment and materials for arterial puncture and blood sampling.

and needle assembly (which has been taped in place on the arm or wrist), and the stopcock is turned to connect the syringe with the side arm. The heparin-fluoride solution in the syringe is forced out the side arm of the stopcock. The cock is then turned to connect the syringe with the needle, and the sample is drawn into the syringe. The stopcock is closed and the syringe is removed. Its tip is inserted beneath the surface of mercury contained in an open dish. A drop or two of blood is ejected from the syringe under the mercury, and a small amount of mercury drawn up into the syringe opening, which is then plugged and sealed with a toothpick or Luer-Lock cap (Fig. 3).

Analysis

Methods of blood gas analysis not requiring chemical alteration of the sample have been developed over the past few years. Most of these depend either on passage of light through the blood sample, or on contact between the blood and the surface of a specialized type of glass electrode. These methods have made possible monitoring of concentrations and tensions of respiratory gases in circulating blood passing through vessels or tissues or while being withdrawn.

content vs. tension

In an earlier article, the difference between *tensions* (or partial pressures) of various gases in liquids, and their *concentrations* was discussed. Changes in CO_2 tension of arterial blood (expressed as $PaCO_2$) have an almost linear relationship to arterial blood concentration of this gas (expressed as $CaCO_2$), provided other factors remain constant. It was explained, however, that the same does not hold true in the case of oxygen. The major determinant of the concentration of oxygen in whole blood is the amount of O_2 bound to hemoglobin in the red blood cells. The reduced hemoglobin of the blood will take up oxygen as the partial pressure of this gas is increased until there is no more *reduced* hemoglobin left—that is to say, until the hemoglobin is completely saturated.

The amount of oxygen taken up before this level is reached is determined by the *oxygen capacity of hemoglobin*, which is 1.34 cc O_2 per gm Hb. In other words, the oxygen *capacity* of a blood sample (or that amount of O_2 which will be present as oxyhemoglobin when the blood is completely saturated) is equal to the hemoglobin in grams multiplied by 1.34.

The amount of O_2 taken up with increasing partial pressure of the gas, however, becomes considerably less as the hemoglobin approaches saturation. After the hemoglobin has all become saturated, further increase in PaO_2 increases the oxygen concentration of the blood only by that amount which continues to dissolve in the plasma. Since solubility of O_2 in plasma is low (only 1/25 that of CO_2), this will not produce a very great increase in concentration even with quite high oxygen tensions.

For each millimeter increase in pressure, each hundred cubic centimeters of blood will increase oxygen content by .00321 cc O_2 dissolved in plasma.

The following example may serve to clarify. The subject has 15 gm hemoglobin per 100 cc blood and is capable of saturating it while breathing room air. Alveolar air will not have a partial pressure of oxygen as great as that of atmospheric air (which is, of course, 20 per cent of the total 760 mm pressure produced by oxygen and nitrogen, minus the pressure of water vapor present) because of dilution of the alveolar gas with CO_2 and additional water vapor. His arterial partial pressure (PaO_2) will actually be about 100 mm Hg. His hemoglobin will carry 1.34 x 15, or 20.1 cc O_2 per 100 cc blood. His plasma will dissolve .00321 x 100. or .3 cc O_2. Total oxygen in his blood will be 20.4 volumes per cent.

Now suppose he breathes pure oxygen for a few minutes and his arterial blood is again analyzed. In spite of 760 mm pressure of inspired oxygen, his maximal theoretical PaO_2 would be 673 mm Hg. Practically, however, it will be in the neighborhood of 600 mm Hg. Oxygen content of his hemoglobin, which was saturated when he was breathing room air, will remain exactly where it was at the first determination. The change will be in dissolved oxygen, .00321 x 600, or 1.9 cc. His blood content will be 20.1 + 1.9, or 22 volumes per cent.

A different situation exists when partial pres-

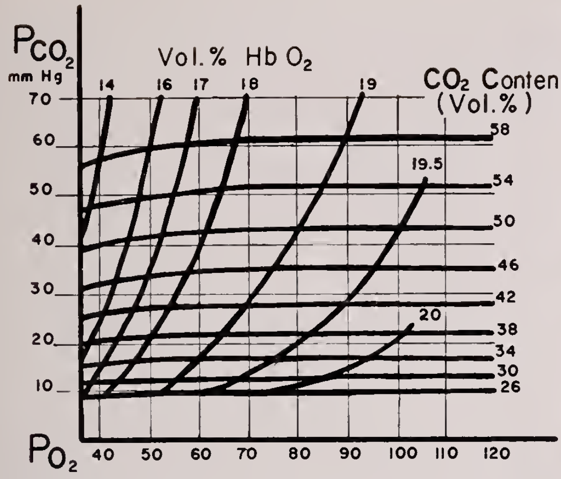

Fig. 4. O_2-CO_2 diagram (from Rahn and Fenn). By taking the point of intercept of two values, values of the other two may be found.

sure of oxygen in his inspired air is reduced below normal levels. Suppose he breathes air containing only 12 per cent oxygen. His PaO_2 will now be approximately 60 mm Hg. From the oxygen dissociation curve we determine that his hemoglobin will be 85 per cent saturated. Therefore, it will carry only 17 cc O_2 per 100 cc blood. Dissolved oxygen will be .00321 x 60, or 0.2 and his total will now be 17.2 volumes per cent.

A nomograph has been prepared relating values of O_2 and CO_2 content and partial pressures for subjects breathing normal atmospheric air at sea level (Fig. 4). If values of two of these are known, this diagram may be used to obtain values of the other two.[1]

manometric methods

For many years the final arbiter of blood gas analysis methods has been the Van Slyke manometric technique.[2] The apparatus consists of a glass pipette which can be opened or closed at the top by a stopcock. A short distance below the stopcock the pipette widens into a bulb which serves as an extraction chamber for gases to be measured. The bottom of the chamber is filled with mercury and connected by tubing to a supply of mercury from a leveling bulb and to a mercury manometer (Fig. 5).

The sample of blood to be analyzed is poured into the top of the extraction chamber, and reagents are added which will free the gases to be measured. The compartment is sealed by closing the stopcock. A partial vacuum is produced in the chamber by lowering the mercury level and the chamber is agitated to release the gases from solution. The mercury level is then raised in the chamber to bring the mixture of gases to a fixed volume, and the pressure at this volume is read from the manometer. Next added to the chamber are reagents which will absorb the specific gas to be evaluated, and the mercury is again adjusted to bring the remaining gas to the same volume as before the absorbing reagents were added. The pressure is again read from the manometer. The difference between these two pressure readings is the pressure of the gas in question at the calibrated volume in the extraction chamber. Thus, knowing this volume-pressure relationship, one may readily calculate the volume the gas obtained from the blood sample would have at 760 mm Hg by simple application of Boyle's law.

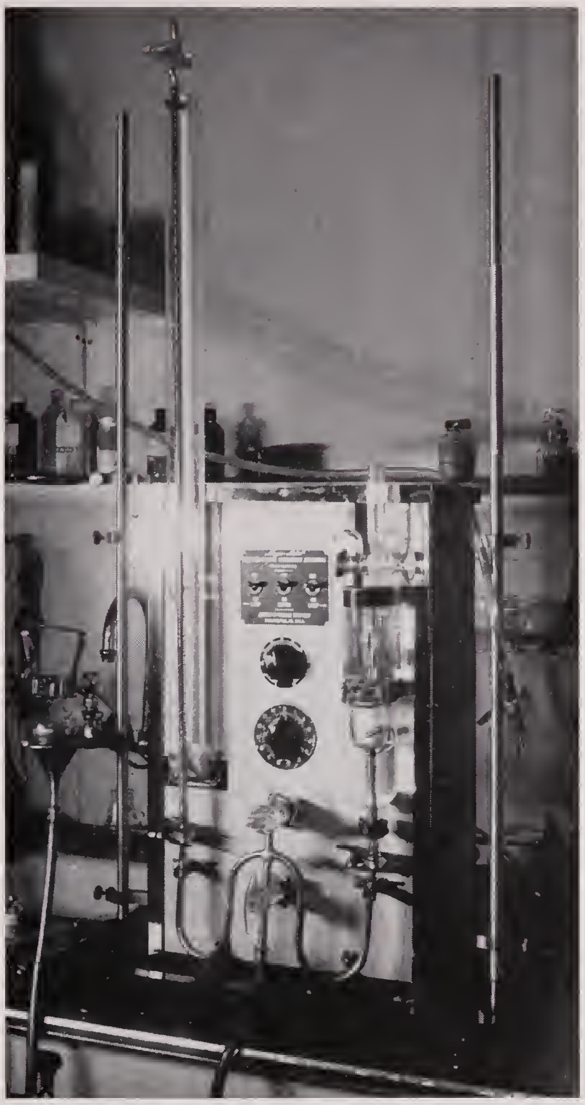

Fig. 5. Thomas-VanSlyke manometric appartus for analysis of gases in blood.

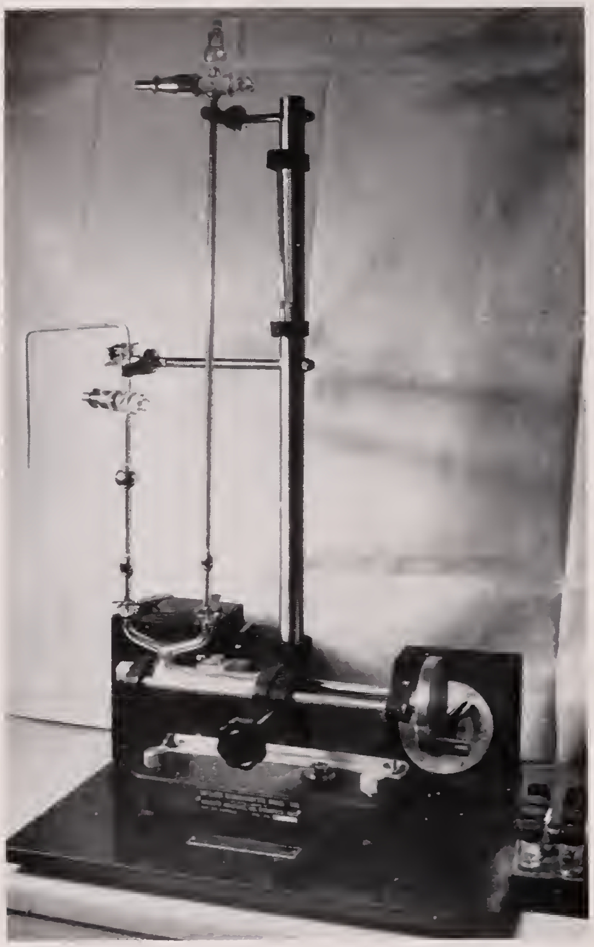

Fig. 6. Natelson Microgasometer. Ultra-micro method for manometric blood gas analysis.

After the oxygen concentration of a blood sample has been determined by the above method, the *percent saturation* is calculated by comparing the O_2 content with the content of a capacity blood sample, the hemoglobin of which has been saturated by agitation in an open flask in room air before subjecting it to analysis.

The Van Slyke manometric method has been modified by Natelson, who has developed an ultramicro precision instrument.[3] This method makes possible combined O_2 and CO_2 determination on a 0.03 ml sample of blood within 15 minutes with an error which should not exceed 1.5 percent in the estimation of oxygen saturation (Fig. 6).[4]

Although the manometric methods remain a dependable standard for analysis of respiratory gases in blood, they leave much to be desired. These methods require intensive and extensive skill, training, and practice on the part of the technician who uses them. Reagents must be freshly prepared, and the apparatus is difficult to keep clean and in working order. The slightest leak in a stopcock will sabotage an analysis.

A problem is encountered in calculating per cent saturation from manometrically determined values for O_2 content, as a result of the fractional amount of oxygen dissolved in the plasma. So long as the subject breathes only room air at atmospheric pressure this poses no major difficulty, since under these conditions the Po_2 of the blood never is high enough that the plasma-contained fraction constitutes more than a very small percentage of the O_2 content of either the tested sample or the capacity sample with which it is compared. When the subject breathes mixtures of gases richer in oxygen, however, the PaO_2 may increase enough to force into solution in the plasma a quantity of oxygen equalling nearly 10 per cent of the amount of this gas present in combination with hemoglobin. The resultant error can, for example, seriously hamper calculation of arterio-venous shunts. This difficulty can be overcome by using a correctional factor, provided the partial pressures of O_2 and CO_2, the pH, and temperature of the blood are known values.[5]

spectrophotometric methods

As early as 1934, Kramer,[6] and later the same year, Matthes,[7] described instruments for measurement of oxygen saturation of blood circulating in vessels, and in 1935 this method was adapted for application to intact tissues of the ear lobe.[8] Millikan, in 1942, developed an improvement of the method, and introduced the term *oximetry*, which has had wide usage since then.[9]

It was not until 1949, when Wood and Geraci developed instruments sensing values for *absolute saturation* directly (without need of setting the instrument at a known saturation at the beginning of each measurement), that this method came into popular clinical use.[10]

The spectrophotometric method for measuring oxygen in blood depends on the differences between the absorption spectra of reduced and oxygenated hemoglobin. The absorption of light by hemoglobin behaves according to Beer's law; that is, with incident light intensity constant, the oxygen saturation at any fixed hemoglobin concentration is a logarithmic function of the intensity of light transmitted through the solution. Since transmission varies with hemoglobin concentration as well as with oxygen saturation, there is a problem of differentiation. It is solved by simultaneously measuring transmission at two different wave-lengths. Since red and infrared are the colors best transmitted through hemoglobin, narrow bands in these regions are used.[11]

This problem has also been approached by using measurement of reflected rather than transmitted light. Oxygen saturation of hemoglobin has been found directly proportional to the logarithm of the intensity of light reflected from blood in the skin or in a cuvette. These reflection readings are almost totally unaffected by the hemoglobin concentration.[12]

Thus far, instruments which apply reflection for measuring oxygen saturation of blood in intact tissue (usually the ear lobe) have found their greatest usefulness in monitoring relative changes of saturation, particularly during anesthesia.[13] Their accuracy is inadequate for more precise measurements. On the other hand, instruments like the Waters cuvette oximeter, developed by Wood of the Mayo Clinic, have become popular for use during heart catheterization.[14] It is so designed that the blood is analyzed as it is drawn through a small polyethylene tube and may be reinjected into the systemic circulation. The conservation of blood thus afforded is a particular advantage in catheterization of infants.

Other spectrophotometric techniques are designed for measurement of hemolyzed blood, and these give fast, accurate results. One such instrument is the Nahas cuvette, which may be used with the Beckman model D.U. spectrophotometer.[15]

chromatographic techniques

Techniques recently introduced for applying gas chromatography to the analysis of gases contained in biological fluids[16] have stimulated interest in using this method to measure respiratory gases in blood.[17, 18] This procedure utilizes molecular sieve columns to separate the individual gases from a mixture of the three respiratory gases and an inert carrier gas (usually helium). The gases are released from the blood by various methods before passing through the columns; in some techniques this is effected by adding reagents in an extraction chamber as in the Van Slyke process, while in others the blood is allowed to equilibrate the partial pressures of its gases with a carrier gas in a closed chamber (Fig. 7).

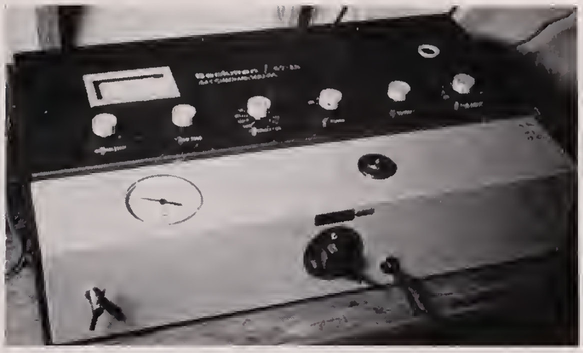
Fig. 7. Beckman Gas Chromatograph.

This method has been successfully applied to analysis of nitrogen as well as carbon dioxide and oxygen.[19]

gas tensions

We have confined the discussion thus far to those analytic methods for measuring content or concentration of blood gases. In some cases, however, this is only part of the information needed. It may be equally important to know the partial pressures of gases when evaluating clinical cardiopulmonary problems.

Until recently there has been a paucity of practical methods available for blood gas tension determination. The Roughton-Scholander Pco_2 method is relatively simple in principle, but in practice it is beset with difficulties similar to those encountered in the Van Slyke technique regarding the skill and practice required of the technician.[20] The instrument used consists of a small cup fitted to a tube attached to a tuberculin syringe. A small bubble of air is introduced into the blood sample in the tube and the mixture agitated to allow partial pressures of gases in the blood and in the bubble to reach equilibrium. The bubble is then drawn into the syringe and measured, after which it is forced back into the liquid mixture. After addition of a reagent (potassium hydroxide) to the mixture to remove the CO_2, the bubble is returned to the syringe barrel for remeasurement. The loss in volume of the bubble between the two measurements represents that portion of the bubble's volume as first measured, which is CO_2. This fraction, multiplied by the atmospheric pressure, is the partial pressure of CO_2 in the gas bubble, and thus also in the blood sample with which it was brought to equilibrium.

electrode methods

The development by Clark, in 1953, of a cellophane-covered platinum cathode (used with a potassium chloride-calomel electrode as an anode) for determination of blood oxygen tensions by polarography made possible a practical method for electrical determination of blood gas tensions.[21] Since 1957 electrode methods have been devised for measurement of CO_2 tensions in blood.[22-24] Recently micro-electrodes capable of performing pH determinations on capillary blood have been perfected, and methods have been described by which these electrodes may be used to determine CO_2 tension.[25]

Electrodes for Pco_2 determinations are constructed to allow carbon dioxide to diffuse from the blood sample through a gas-permeable membrane into a thin film of sodium bicarbonate solution on the surface of a conventional pH electrode. Since physically dissolved carbon dioxide changes the pH of an aqueous solution proportional to log Pco_2 of the solution, the change of potential of the electrode will accurately indicate the Pco_2 of the blood sample (Fig. 8).

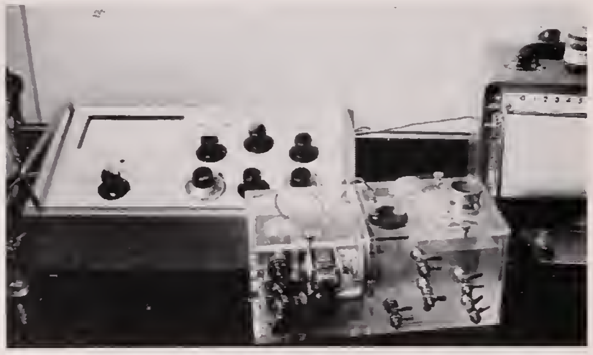

Fig. 8. Combination of electrodes for measuring gas tensions in blood. The electrodes are inside a sealed chamber in a constant temperature water bath. Samples are measured by injecting into the stopcocks on the front of the water bath. Signals from electrodes are measured by the Beckman physiological gas analyzer, and may be monitored by a recorder.

These electrode methods have proven most valuable clinically, particularly because they provide rapid, on-the-spot answers in acute cardiac and respiratory emergencies.

hydrogen ion concentration

At any partial pressure of the gas, the concentration of either carbon dioxide or oxygen in blood is influenced by temperature and hydrogen ion concentration. An understanding of these relationships is necessary in the interpretation of pathologic alterations of respiratory physiology. This knowledge also enables us to use arterial blood gas analysis as a tool in the management of acute metabolic acidosis occurring in numerous medical emergencies, including cardiac arrest, salicylate and other drug intoxications, acute renal failure, diabetes, and cardiopulmonary by-pass during open heart surgery.

Actually, the electrode methods for measurement of gas tensions in blood, described in the preceding section, have been made possible by modifications of the conventional electrode principle used to measure hydrogen ion concentration in liquids. The type of pH electrode commonly used consists of a very thin bulb of a special type of glass which is filled with some standard electrolyte such as 0.1 N HCl. When the bulb is immersed in an unknown solution, a potential difference develops between the solutions inside and outside of the glass bulb. The magnitude of this difference in electric potential depends on the hydrogen ion concentration of the unknown solution. This potential difference is measured by combining the glass electrode with a standard half cell, usually a saturated calomel electrode, and measuring the voltage produced. Because of the high resistance of the glass membrane, some type of amplification of the signal is required. Vacuum tube

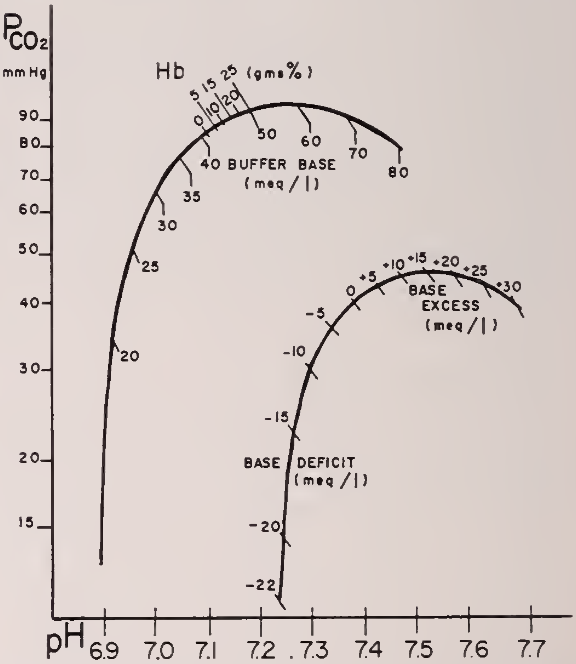

Fig. 9. Nomograph for determining acid base status from blood gas measurements (from Andersen and Engel).

amplifiers are generally used for this purpose.

In 1960 Siggaard Andersen and co-workers described an improved instrument consisting of a micro-electrode which could be used effectively with capillary blood for rapid pH determination.[25] By the principle of equilibrating the sample with standardized gases of two different known CO_2 tensions and measuring the pH at these corresponding known Pco_2 levels, they were able, by applying the proportional relationship between pH and Pco_2, to calculate the initial Pco_2 of the sample.

Since hemoglobin constitutes the major effective portion of buffer base present in blood, it is possible to construct a nomogram relating hemoglobin concentration, pH, Pco_2, and *amount of base excess or deficit.*[26] With a simple hemoglobinometer and the pH and Pco_2 electrodes already described, values for the first three of these measurements may be obtained at the bedside within minutes, and the amount of base deficit or excess expressed in milli-equivalents per liter may be immediately determined from the nomograph (Fig. 9).

Clinical Application

acid-base problems

By the above methods one may obtain quickly (and, if necessary, monitor frequently) three important measurements, which make it possible to "titrate" treatment in emergency acid-base derangements, and thus quickly restore and maintain homeostasis. These three values are 1) pH, 2) Pco_2, and 3) base deficit (or excess). From these three values one may determine: 1) whether a patient is acidotic, alkalotic, or neither; 2) whether the derangement is primarily *respiratory, metabolic,* or both; 3) whether, when *metabolic* derangement is present, there is attendant *respiratory compensation,* or in case the primary alteration is *respiratory,* whether there is *metabolic compensation.*

Acidosis or alkalosis is present if the pH is below 7.36 in the former or above 7.4 in the latter case. (The normal mean value for pH of human blood is usually considered to be 7.38 at normal temperature.) *Respiratory* acidosis or alkalosis occurs with excess or deficit of volatile acid in the blood and tissues. This volatile acid is present as carbonic acid, or dissolved CO_2, which is excreted primarily by the lungs. On the other hand, *metabolic* acidosis or alkalosis results from excess or deficit of fixed acid anions in the blood and tissues in relation to the fixed basic cations present. These fixed acids can only be excreted by the kidney.

The Pco_2 is a measurement of excess or deficit of volatile acids. Thus if the Pco_2 is higher than 40 mm Hg, there is an excess of carbonic acid, and if the pH is below 7.36 at the same time, we may conclude that respiratory acidosis is present. The retention of excess fixed acids is indicated by measurement of base deficit (expressed in mEq/L). When base deficit is found and pH is below 7.36, metabolic acidosis is present. If there is measureable base excess, and the pH is elevated, metabolic alkalosis is present.

If the acid-base abnormality is the result of retention or deficit of CO_2, hyperventilation may be indicated in treating the former and hypoventilation, rebreathing, or addition of CO_2 to the respiratory gas mixture in the latter case. Metabolic acid-base imbalance ultimately must be corrected by the kidney, by retention or excretion of the necessary cations or anions. Immediate corrective efforts in metabolic acidosis, however, are directed at addition of needed cations (usually as sodium bicarbonate), or in some cases, the addition of tris(hydroxymethyl) aminomethane (THAM), which binds acid anions by acting as an organic base.

It has been found that with variance from normal temperature the pH of homeostasis is different from that at normothermia. This has necessitated development of correctional factors for application to interpretation of blood gas measurements made during procedures performed under hypothermic conditions such as occur in some open heart operations.[27, 28]

pulmonary insufficiency

The previous articles of this series have dealt with pathologic mechanisms which result in *pulmonary insufficiency,* and different disease entities in which these mechanisms are present. The only possible means of quantitatively measuring pulmonary insufficiency, however, is by arterial blood gas analysis. Most clinicians are unable to detect visible cyanosis until the arterial oxygen saturation is below 85 per cent. Patients

Table 1. Arterial Blood Gases—Normal Values

O_2 content (breathing room air at sea level)	17.5 to 20.5 vol. %
O_2 per cent saturation (breathing room air at sea level—resting or exercise)	> 94%
O_2 per cent saturation (breathing 100% O_2)	100%
(Plus 1.9 ml O_2 dissolved in plasma/100 ml blood)	
O_2 capacity	1.34 X Hb (in gm/100 ml) plus 0.3
O_2 tension (breathing room air)	95 to 100 mm Hg
O_2 tension (breathing 100% O_2)	600 to 640 mm Hg
CO_2 content, whole blood	49 vol.% or 21.9 mM/L
CO_2 content, plasma	59.6 vol.%
CO_2 tension	40 mm Hg
pH	7.4

are hypoxic from the physiologic standpoint, however, if the arterial blood is less than 94 per cent saturated with oxygen. Since pulmonary insufficency by definition is the failure of the lungs to carry out adequately the function of gas exchange, it is always manifested by hypoxia, and sometimes by hypercarbia if CO_2 retention is also present (Table I).

Pulmonary insufficency is sometimes classified by division into the following four categories A) Hypoxia with exercise, but arterial blood saturated at rest; B) Hypoxia at rest, but no CO_2 retention; C) Hypoxia and hypercarbia; and D) Severe hypoxia, with hypercarbia, and pulmonary hypertension. This classification of pulmonary insufficency is sometimes combined with a I through IV classification of pulmonary disability to provide a classification of chronic respiratory disease analogous to that in common usage for heart disease.

A-V shunts

If hypoxia which is present while breathing room air (at atmospheric pressure) is not corrected by breathing 100 per cent oxygen, a true anatomic shunt is practically certain to be present. The ratio of the amount of shunted blood to the total cardiac output may be quantitatively determined from an equation which requires known values of oxygen concentration of arterial blood, mixed venous blood, and end-pulmonary capillary blood. Arterial blood may be obtained by arterial puncture, and mixed venous blood by right heart catheterization. If the patient breathes 100 per cent oxygen, the end-capillary blood may be assumed to contain an amount of oxygen equal to the O_2 capacity of hemoglobin plus 2.0 ml of dissolved O_2 per 100 ml.

In clinical practice detection of a relatively small shunt may be missed if 100 per cent oxygen is breathed, since this produces such a high alveolar Po_2 that the arterial blood may still be saturated. For this reason it has been found useful to use a 40 per cent oxygen breathing mixture for detection of shunts. Another alternative is to use Po_2 measurement (made by the polarographic-electrode methods), rather than content measurements, since the dilution by shunted blood will affect the oxygen tension of the samples even though the hemoglobin is saturated.

permeability defects

While accurate quantitation of impaired permeance (or diffusion) is best accomplished by measuring the transmission of carbon monoxide across the alveolar-capillary membrane, this technique is not always available to the clinical laboratory. For practical purposes one can accept a marked increase in hypoxia brought on by exercise as evidence of a membrane permeability defect. This is because exercise increases the rate at which blood passes through the pulmonary capillaries, allowing less time for it to come to equilibrium with the alveolar gas. Unless the rate of diffusion of gases through the membrane has been slowed down by defective permeability, the time of passage is still adequate for the blood to become saturated. If the membrane permeability is impaired, however, complete saturation is not attained during this time, and the saturation of arterial blood will be lowered.

Because of the high solubility of CO_2, impairment of membrane permeability never causes carbon dioxide retention.

ventillation-perfusion abnormalities

Non-uniform distribution of alveolar gas in relation to bloodflow—that is to say, abnormality of ventilation-perfusion ratios—is the derangement most commonly responsible for hypoxia and hypercarbia. This, and hypoventilation, are the only two physiologic alterations in which retention of carbon dioxide occurs. Thus, if hypercarbia is present on arterial blood gas analysis, and measurement of alveolar ventilation is not below normal, then ventilation-perfusion abnormalities are certainly present. ■

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Contralateral Ureteroureterostomy

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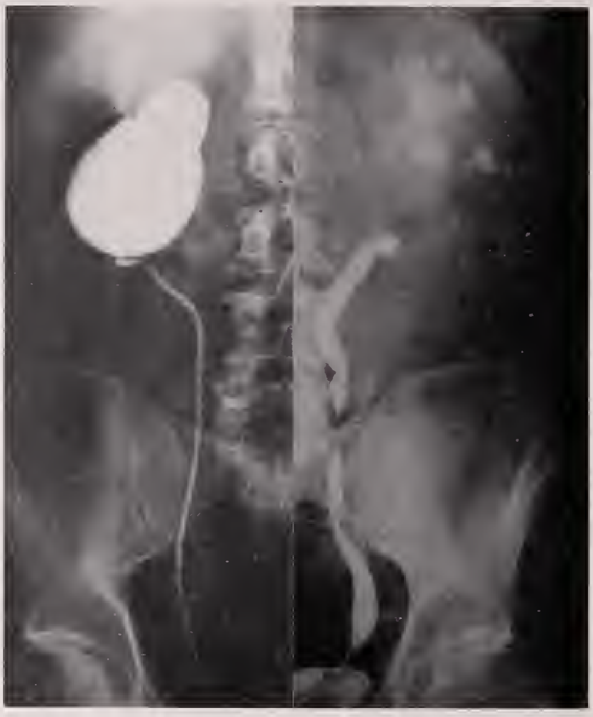


Fig. 1. Right pyelogram 12/23/58; left pyeloureterogram 12/5/58; note constricted area at L-5 on the left, and severe UP obstruction right.

In recent years, the ingenuity of urological surgeons has been growing, so that various organs have been used to substitute for ureters irreparably damaged. The most common among these substitutes is the ileum, but it has also been suggested that the contralateral ureter could very well be used in suitable instances. Such instances might include one in which one kidney is destroyed but its ureter is still good, whereas the opposite kidney's ureter is poor. The end of the two ureters could be anastomosed across the midline to produce satisfactory drainage. This is a case report of just such a situation and, at the time that it was done, I was not aware that this procedure had been used in any other cases. Only two others have been reported, to my knowledge, since that time.[1,2]

CASE REPORT

This fifty-four year old inmate of the Washington State Penitentiary, about November 1, 1958, began to have attacks of coma, each lasting several hours, left ureteral colic, and prostatism. From childhood to age twenty-one he had right ureteral colic which gradually disappeared. After his arrest, November 29, 1958 and transfer to the Penitentiary, on December 23, 1958 he was found to have BUN of 60 mg per 100 ml and PSP of 10 per cent in two hours. Cystoscopic study showed a grade 2-3 hydronephrosis and hydroureter on the left, non-functioning right kidney with a normal right ureter, (Fig. 1) and slight trilobar prostatic hyperplasia. A right nephrostomy was done, December 24, 1958, but no significant urinary output occurred at any time. An inlying catheter produced improvement in his BUN and PSP, but the left hydronephrosis progressed in spite of ureteral dilations, December 23, 1958, and January 31, 1959. Repeat pyelogram at this time showed increased obstruction of the middle third of the left ureter. Needle nephrostomy on the left, February 2, 1959 resulted in further improvement of his BUN and PSP. On March 17, 1959 dye was injected through the nephrostomy drain for an antegrade pyelogram. The film showed the ureter to be obstructed at the iliac artery and at the bladder wall. Two days later the ureter was dilated again, this time to size 14, and a size 8 ureteral catheter was left in place. Exploration of the ureter was carried out, March 23, 1959. Retroperitoneal fibrosis as described by Ormund,[3] was found. It had caused a stricture and had partially encased the ureter all the way from the bladder to the kidney, with normal ureter caliber on ureterostomy. Size 10 splint was left up the ureter from the bladder to the kidney, and the ureter was moved laterally away from

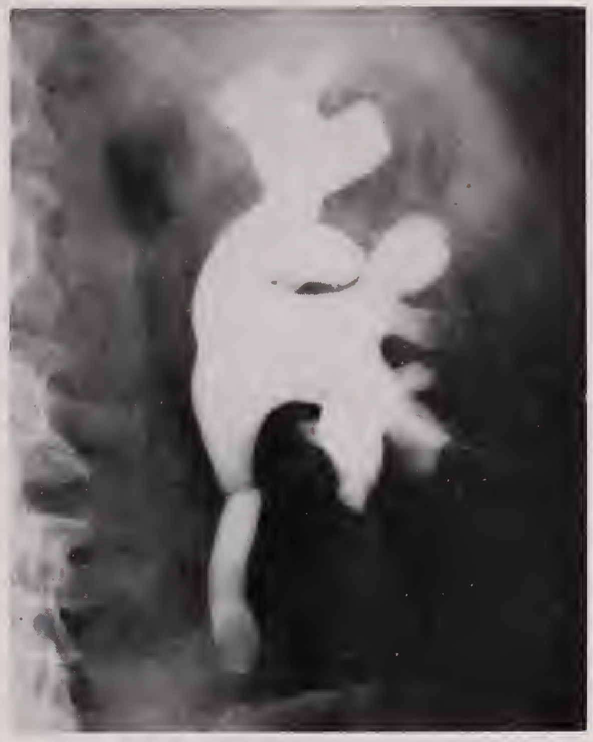


Fig. 2. Left antegrade pyelogram, 6/11/59; the radiolucent area in the ureter at the obstruction is not explained, and may have been an air bubble.

the fibrosis. Further improvement occurred in the PSP, to 2.75 minutes appearance time, with 37.5 per cent in thirty minutes. The splinting catheter had to be removed on the twelfth post-operative day because of sand, and on the thirty-second day I.V. urogram and BUN showed poorer function of the kidney. Ureteral dilation was repeated on April 25, but the ureter was found to be blocked. Left nephrostomy was done. Six weeks later, June 11, 1959, an antegrade pyelogram showed the ureter to be blocked 7 cm below the UP junction. (Fig. 2).

On June 29, 1959, a transverse upper abdominal incision was made and right nephrectomy carried out, cutting the ureter off at the UP junction, below which point it was normal. The left ureter was also cut off just above the point of obstruction, and the ends of the two ureters anastomosed obliquely with interrupted sutures. The attempt to bring the right ureter retroperitoneal anterior to the vessels was blocked by the fibrosis, so it was brought intraperitoneal across the midline and then retroperitoneal, where the anastomosis was made. The ureter was then covered with mesentery to protect against urinary leakage. No splint was used. A cigarette drain was placed into the old right nephrostomy stab wound. The left kidney was drained with the previously placed nephrostomy tube. Post-operative course was complicated by an infected subfascial hematoma, which left him with an incisional hernia. Very little drainage occurred into the bladder at any time, so on July 24, 1959, the twenty-fifth post-operative day, cystoscopy and right ureteral dilatation to size 14 was carried out, all bulbs meeting obstruction at the bladder wall, and being blocked at 26 cm. A retrograde ureteropyelogram was made, (Fig. 3), showing the anastomosis to be open and the kidney pelvis much less dilated than before, with a capacity of only 25 cc as compared to 95 cc as recently as July 18, 1959 when the tube was blocked with sand for the second time. A

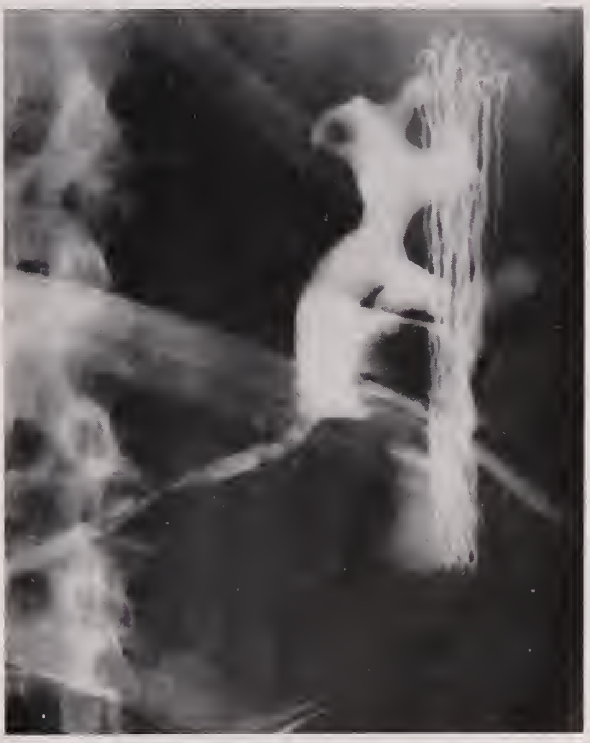


Fig. 3. Retrograde bulb ureteropyelogram. The area of construction is apparently the site of anastomosis 7/24/59.

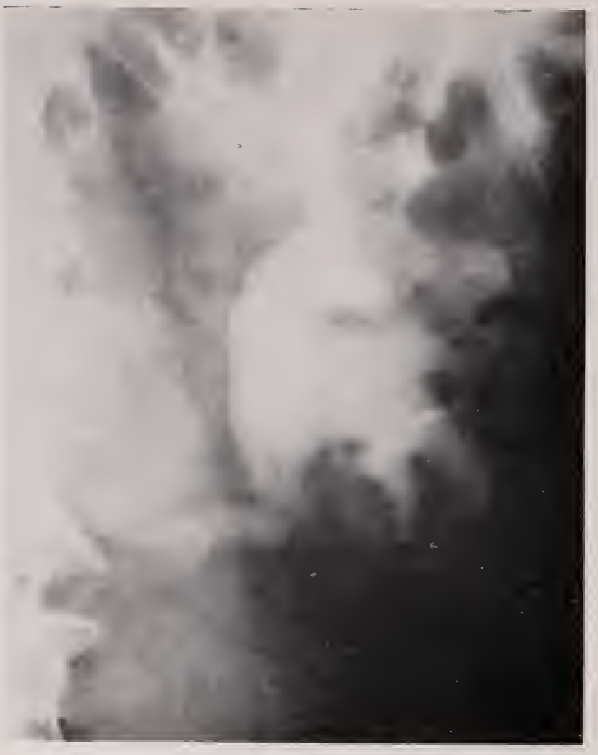


Fig. 4. I. V. urogram 8/20/60, 10 minute film. This shows as much of the ureter as was visible at any time.

Table 1
Progress of Kidney Function

Date	BUN	PSP App. Time	PSP percent 30 min.	PSP percent 2 hrs.
12/5/58	43			20
12/23	60			10
12/24	76.5			
12/27	64	16	10	
1/10/59	35	15	20	
1/15	22	12	15	
3/28	13	2-3/4	37	
6/16	26	3-1/2	23	
9/9	55	5	23	
10/20	48			
8/20/60	33.4			

size 6 catheter could be passed through the anastomosis obstruction at 26 cm, and was left indwelling for four days. The nephrostomy tube was clamped, and on removal of the splint and urethral catheter, the patient began voiding up to 225 cc at a time. Kidney residual was only 35 cc. The nephrostomy tube was removed on August 8, 1959. The wound closed immediately.

During the year following this the patient had a variable amount of urinary infection, treated with antibiotics, sulfa, and nitrofurantoin (Furadantin), as his stomach would tolerate them. His last studies were on August 20, 1960, at which time his BUN was 33.4 mg per cent (Table 1) and his I.V. urogram (Fig. 4) showed Grade 2 calyectasis with good drainage. Some dilatation of the left ureter above the anastomosis was still present. Patient refused a cystoscopic study. He was paroled about October 1, 1960, and immediately skipped parole, so that no follow-up has been available as late as January 1, 1963.

summary

A fifty-four year old man who had a congenital ureteropelvic obstruction with hydronephrotic destruction of the right kidney, developed retroperitoneal fibrosis obstructing his left ureter. After dilations and surgical attempts at relief of this obstruction failed, right nephrectomy and end-to-end anastomosis of the right and left ureters were carried out successfully. As far as is known, this is the first instance of this type of correction. ■

120 East Birch St.

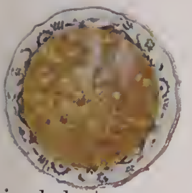
REFERENCES

1 Anderson, H. V., Hodges, C. V., Behnam, A. M., and Ocker, J. M., Transuretero-ureterostomy (contralateral uretero-ureterostomy): experimental and clinical experiences, J Urol 83:593-601 (May) 1960.

2 Hamm, F. C., Weinbert, S. R., and Waterhouse, R. K., End-to-end ureteral anastomosis: a single original technique. Paper read at Los Angeles, May 24, 1961.

3 Ormond, J. K., Bilateral ureteral obstruction due to envelopment and compression by an inflammatory retroperitoneal process, J Urol 59: 1072-79 (June) 1948.

Hope you're not allergic to shellfish, Doctor



If you're not allergic to oysters, clams, or shrimp, then you probably enjoy shellfish soups. Even the aroma of a steaming bowlful of Clam Chowder, Oyster Stew, or Cream of Shrimp Soup is very likely to kindle the appetite of a tired doctor . . . or of his patients, too, for that matter.

Campbell's shellfish soups, in fact, are one of the best ways you may find of adding interest to a patient's diet or of getting him to follow the diet that you've prescribed. These soups are made with succulent clams, tender little shrimp, or flavorful oysters. They have a wide variety of essential nutrients and provide nourishment and fluid which the body can readily utilize. A single 7 oz. serving of Cream of Shrimp Soup, for instance, provides a patient with about 4.0 gm. of protein and 132 calories. For a patient who needs something satisfying but with fewer calories, suggest Manhattan Style Clam Chowder with approximately 63 calories per serving.

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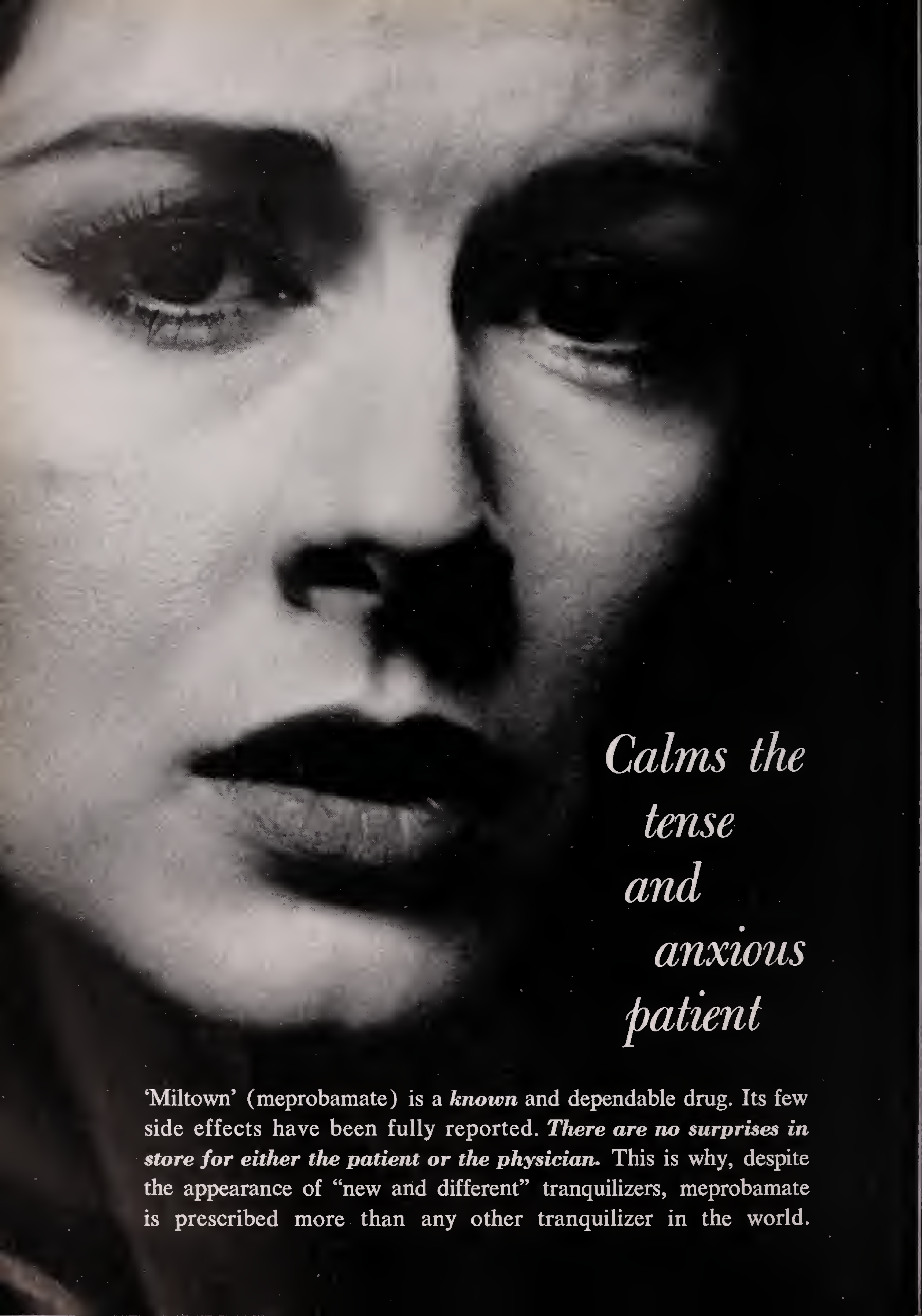
Recommend Campbell's Soups to your patients...and, of course, enjoy them yourself. There's a soup for almost every patient and diet, for every meal.



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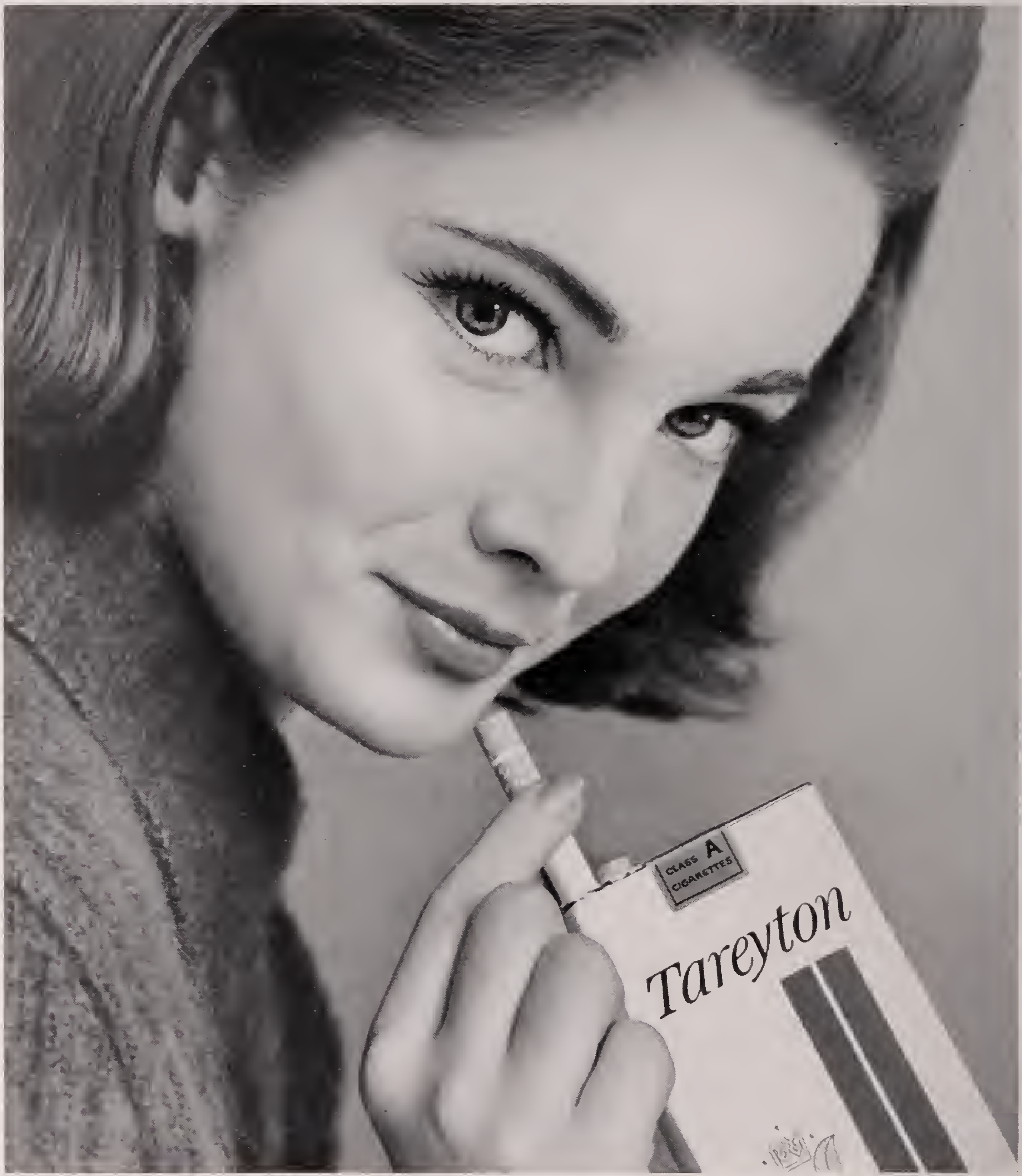

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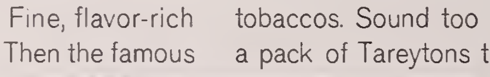

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IDAHO

SUN VALLEY

JUNE 26-29 1963
SEVENTY-FIRST
ANNUAL SESSION

And what is so rare as a day in June?
Then, if ever, come perfect days;
Then Heaven tries the earth if it be in tune
And over it softly her warm ear lays.
James Russell Lowell

Rare indeed are the June days at Sun Valley when the Idaho State Medical Association holds the most pleasant of all medical meetings. And a rare privilege it will be this year to attend the 71st annual meeting, planned to surpass in interest, pleasure and value, anything Idaho has done before.

Idaho has a fine reputation for innovation. Once more the pattern for the annual meeting has been torn to pieces and reassembled, with obvious improvements worked into the new design. The meeting will start on Wednesday, end on Saturday, and allow recreation time between.

Most important, however, is the new scientific session, with ten outstanding speakers who will present a broad program of postgraduate education. This one should not be missed.

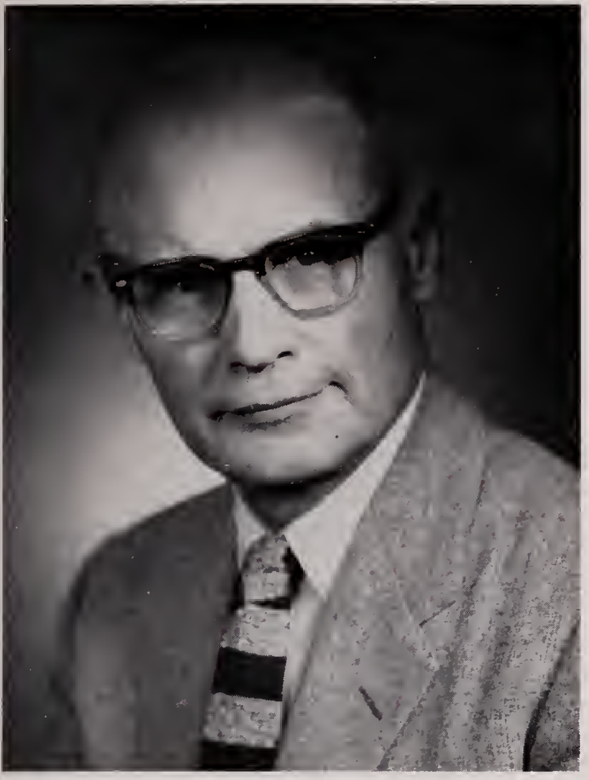
Writing about Idaho State Medical Association meetings at Sun Valley tends to exhaust one's superlatives. They merit nothing less. If you have never attended one of these remarkable sessions, this is the year to see for yourself. They are not like any other. Plan now to get benefit and bonus from the education and enjoyment offered at Sun Valley. H.L.H.

It has been my privilege as Program Chairman, with the assistance of the Program Committee, to prepare an entirely new format for the Scientific Session of the 71st annual meeting, being held this year in conjunction with Idaho's Centennial Celebration.

The theme of the program is, *Emphasis: Scientific Knowledge.* Ten guest speakers, all prominent physicians and instructors, will present sparkling scientific discussions on: Space Medicine, Heart Surgery, Epidemiology, General Surgery, Internal Medicine, Pediatrics, Obstetrics and Gynecology, Orthopedics, Pathology and Thoracic Surgery.

We have attempted to arrange a program to your personal liking no matter what field of medicine you pursue. We hope you will join us at Sun Valley, June 26-29, for an outstanding medical meeting.

MAX F. BELL, M.D.
Program Chairman



Manley B. Shaw, M.D.

EMPHASIS: SCIENTIFIC KNOWLEDGE

You and yours are invited to share with us the fine postgraduate session we have been planning for our 71st Annual Session at Sun Valley, June 26-29. Ten nationally prominent physicians and instructors will present the program built on the theme—*Emphasis: Scientific Knowledge.* Max F. Bell, Boise, and his hard-working committee have been planning this meeting for many months. It is the most ambitious program Idaho has ever undertaken, and we believe every general practitioner and all specialists will find it very much worth-while.

On behalf of the Idaho State Medical Association, I urge you to come to Sun Valley to spend four wonderful days with us at one of America's great vacation spots. You've heard about winter fun at Sun Valley, but did you know that this famous resort offers much greater variety of activity in summer than in winter? We've planned our meeting so you may enjoy all of it with the meeting.

Everyone likes Sun Valley in June. Days are warm, the air is clean, and evenings are refreshingly cool. There is golfing, trap shooting, ice skating, tennis, fishing, horseback riding, mountain climbing, and the best kind of loafing you can find. Everyone is away from home and able to relax accordingly.

You're out of uniform at Sun Valley if you show up in anything but sport clothes, with two exceptions. A business suit is best for the "Welcome to Sun Valley Party" Wednesday evening and dinner jacket is in order for the banquet on Saturday.

We are particularly fortunate this year to have Norman Welch, of Boston, as our Featured Speaker. He is Speaker of the House of Delegates of the American Medical Association and an outstanding personality in the profession. His rich voice, fluent expression and ready wit have made him one of the most popular of AMA speakers. He will discuss "Problems Associated with the Preservation of the Private Practice of Medicine." You will thoroughly enjoy his talk.

Again, I urge you to be with us at Sun Valley, June 26-29.

Manley B. Shaw, M.D., President,
Idaho State Medical Association

BENSON B. ROE, M.D.

CARL M. EKLUND, M.D.

GEO. E. MOORE, M.D.

GEO. H. LOWREY, M.D.

D. H. STODDARD, M.D.

Program

1. *Selection of Patients for Surgical Correction of Congenital Heart Disease*
2. *Prevention and Treatment of Postoperative Respiratory Complications*

BENSON B. ROE, M.D., SAN FRANCISCO, CALIFORNIA
Associate Professor of Surgery, University of
California School of Medicine

1. *Recent Trends in Virus Research of Interest to the Practicing Physician*
2. *A Review of Clinical and Diagnostic Features of Virus Diseases*

CARL M. EKLUND, M.D., HAMILTON, MONTANA
Medical Director, National Institute of
Allergy and Infectious Diseases, Rocky
Mountain Laboratory, U.S. Public Health Service

1. *The Chemotherapy of Solid Tumors*
2. *Advances in Cancer*

GEORGE E. MOORE, M.D., BUFFALO, NEW YORK
Director, Roswell Park Memorial Institute,
Department of Health, State of New York

1. *Diabetes Melitus in Children*
2. *Inborn Errors of Metabolism*

GEORGE H. LOWREY, M.D., ANN ARBOR, MICHIGAN
Associate Professor of Pediatrics,
University of Michigan Medical School

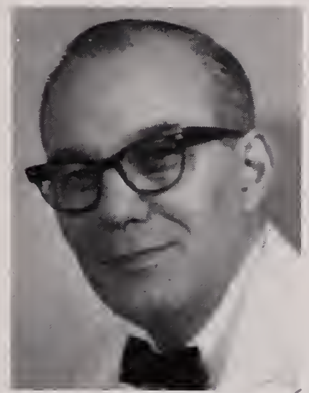
1. *The Role of Physicians in Space Medicine*
2. *Future Concepts of Space Flights and Anticipated Physical Stress*

D. H. STODDARD, M.D., WASHINGTON, D.C.
Assistant Director for Medical Operations, Space Medicine,
Office of Manned Space Flight, National Aeronautics and
Space Administration

ALLAN C. BARNES, M.D.

WILLIAM E. SNELL, M.D.

JAMES V. WARREN, M.D.



N. J. WILSON, M.D.

JOHN K. FROST, M.D.

Program

1. *What Makes the Uterus Work?*
2. *The Infected Cervix*

ALLAN C. BARNES, M.D., BALTIMORE, MARYLAND
Professor and Chairman of Department of Obstetrics and Gynecology,
Johns Hopkins University School of Medicine

1. *Management of Femoral Fractures in Children*
2. *Helpful Aids in the Management of Trauma*

WILLIAM E. SNELL, M.D., PORTLAND, OREGON
Associate Professor of Orthopedic Surgery and
Head of the Department of Orthopedics,
University of Oregon Medical School

1. *The Heart in Heart Failure*
2. *Anticoagulants in Vascular Disease, The Pro and Con*

JAMES V. WARREN, M.D., COLUMBUS, OHIO
Professor, Department of Medicine, Ohio State
University College of Medicine

1. *Practical Problems in Thoracic Surgery*
2. *An Approach to the Surgical Treatment of Pulmonary Tuberculosis*

NORMAN J. WILSON, M.D., BOSTON, MASSACHUSETTS
Assistant Clinical Professor of Surgery,
Tufts University School of Medicine and
Associate, Overholt Thoracic Clinic

1. *Cancer of the Female Genital Tract: The Current Role and Future Trends of Clinical Cytopathology*
2. *Cancer of the Respiratory and Alimentary Tracts: The Current Role and Future Trends of Clinical Cytopathology*

JOHN K. FROST, M.D., BALTIMORE, MARYLAND
Director, Division of Cytopathology, Johns Hopkins
University School of Medicine

Featured Speaker

NORMAN A. WELCH, M.D.

Speaker, House of Delegates, American Medical Association

"PROBLEMS ASSOCIATED WITH PRESERVATION OF THE PRIVATE PRACTICE OF MEDICINE"

Saturday, June 29, 12:00 **EVERYONE INVITED**

General Information

HOUSE OF DELEGATES meets at noon, Wednesday, June 26.

SCIENTIFIC SESSIONS 9-12, 1-4 Thursday and to 4:30 Friday and Saturday.

REGISTRATION FEE, non-resident physician $25, physician's wife $2. Privilege of attending is a dues benefit to members of ISMA.

ANNUAL BANQUET (formal) Saturday evening.

TRAIL CREEK PARTY, Thursday evening, no planned social activity Friday evening.

Write to Adolph Roubicek at Sun Valley or to Idaho State Medical Association, Sonna Building, Boise, for room reservation. See coupon, page 374.

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Boise Valley ACS Meets in May

Boise Valley Chapter of the American College of Surgeons will meet at the Owyhee Hotel, Boise, May 25, at 2:00 p.m. Guest speaker, David C. Dahlin, of Rochester, Minnesota, will discuss "Malignant Transformations of Benign Conditions." All physicians are invited.

New Officers

New officers of the Bonner-Boundary Medical Society for the coming year include: President, C. J. Edwards, Bonners Ferry; Secretary-Treasurer, Helen E. Peterson, Sandpoint; Delegate, C. J. Edwards, Alternate Delegate, Helen E. Peterson.

New officers of the Idaho Falls Medical Society are: President, Reid H. Anderson, Idaho Falls; President-Elect, Wendell L. Nielsen, Idaho Falls; Secretary-Treasurer, Wendell Petty, Shelley. Delegates are: J. Douglas Davis, Maurice K. Heninger, Ervine S. Bills, Reid H. Anderson, Mark Baum, all of Idaho Falls, and Tius W. McCowin, Shelley. Alternate delegates: Byron T. Weeks, R. Reed Fife, G. Curtis Waid, Farrel L. Hansen, Taylor H. Carr, and Leland K. Krantz, Idaho Falls.

New officers of the Bear River Valley Medical Society are: President, Emmett E. Herron, Grace; Secretary-Treasurer, C. C. Johnson, Grace; Delegate, Eugene F. Landers, Montpelier.

New officers of the North Idaho Medical Service Bureau, Inc., chosen during a recent meeting of the organization are: President, Burton R. Stein, Lewiston; Vice-President, David C. Valder, Moscow; Secretary-Treasurer, James H. Bauman, Lewiston; and Board members are John E. Carssow, Rex G. Layton, and Oliver Mackey, Lewiston, and Roland Brooks, Moscow. William P. Marineau, Moscow, served as President during the past year. Mr. John Goplerud is Executive Director of the Bureau.

Symposium on Human Endeavor

A series of lectures, demonstrations and discussions on endeavor will be held at the College of Idaho, Caldwell, June 10-14. Topics will be in the fields of sports medicine, anatomy, physiology, nutrition and neurology and their relationships to physical endeavor.

Speakers will be Peter V. Karpovich, Springfield, Mass.; Josephine L. Rathbone, Ph. D., Springfield, Mass.; James Melby, Boston; Harold W. Brown, Nampa, Idaho; Birger L. Johnson, Ph. D., Fresno, Calif.; Arthur Kemmerer, Tucson; Bob Beeton, M.S., trainer at Idaho State University; and John F. Stecher, Caldwell.

Further information may be obtained from Miss Shirley Kroeger, Symposium Director, The College of Idaho, Caldwell, Idaho.

RESERVATION REQUEST

(In view of anticipated heavy registration it is advisable to make reservations before June 1)

SEVENTY-FIRST ANNUAL MEETING

IDAHO STATE MEDICAL ASSOCIATION

SUN VALLEY JUNE 26-29, 1963

Mr. Adolph Roubicek
Convention Manager
Sun Valley, Idaho

Please reserve:

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______ Single room

Names of persons in party:

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The muscle relaxant properties[2] of this drug provide an extra dimension of effectiveness...relaxing the spasm which so frequently accompanies psychogenic disorders. Hence, the total therapeutic effect of TRANCOPAL (chlormezanone/Winthrop)—a true "tranquilaxant"—is to produce a relaxed mind in a relaxed body.

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Dosage: Adults, 1 Caplet (200 mg.) three or four times daily; in some patients 100 mg. three or four times daily suffices. Children (5 to 12 years), from 50 to 100 mg. three or four times daily.

References: 1. A.M.A. Council on Drugs: J.A.M.A. 183:469 (Feb. 9) 1963. 2. Gruenberg, F.: Curr. Ther. Res. 2:1 (Jan.) 1960.

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PRESIDENT *Melvin W. Breese, M.D., Portland*
SECY.-TREAS. *James H. Seacat, M.D., Salem*
EXECUTIVE SECRETARY *Mr. Roscoe Miller, Portland*
annual meeting, September 25-28, 1963, Portland

Alumni-Sommer Memorial Meeting Draws Crowd

Panel on hypertension. Seated, The Right Honorable Lord Russell Brain, FRCP, FACP; Robert W. Wilkins, M.D.; George A. Hallenbeck, M.D. Standing, Howard P. Lewis, M.D.; Clarence V. Hodges, M.D.

A well filled auditorium greeted speakers at the annual meeting of the University of Oregon Medical School Alumni Association and the Sommer Memorial Lectures last month. Scientific sessions were held in the Medical School Auditorium, Portland, April 24-26. Banquet and dance were at the Benson Hotel, Thursday evening, April 25.

An interesting departure from the announced program was a report on experimental work with gastric freezing. This was given by George A. Hallenbeck, of Rochester, Minnesota, who divides his time between clinical practice of surgery and experimental work in the laboratory. He has not yet used the freezing apparatus in the hospital. Extent of freezing, in a given period, was found to depend on the size of the animal. Complete freezing of the stomach and contiguous structures, in a small animal, led to extensive necrosis. In a 70 Kg pig, effects were only focal. Dr. Hallenbeck believes that benefit of the process depends on destruction of tissue but its extent is hard to assess.

Robert W. Wilkins, of Boston University, clarified fundamental physiology of a number of circulatory phenomena in three interesting lectures. He used a blackboard throughout his talks and spoke without resorting to notes.

The Right Honorable Lord Russell Brain discussed headache, neurological complications of neoplasm, and neurology of the cervical spine with the British thoroughness characteristic of his well known text on neurology.

All three Sommer Lecturers participated in the concluding panel discussion on hypertension. Moderator was Howard P. Lewis, chairman of the department of medicine at UOMS. Clarence V. Hodges, head of the department of urology, discussed the contributions of urologic surgery to the cases reviewed and presented slides illustrating procedures.

Highlight of the annual banquet was presentation of certificates and awards. Lifetime membership in the Alumni Association was awarded to Merl L.

Joseph Nohlgren, alumni association president, awards special honors. Honorary membership was granted to, 1. Oliver M. Nisbet, 2. Blair Holcomb, and 3. Eugene W. Rockey. 4. The association's Meritorious Achievement Award was presented to Howard P. Lewis.

Margason, '23, Carleton P. Pynn, '23, and Ira E. Gaston, '18, of Portland; Charles D. Donahue, '19, Eugene; Norman E. Irvine, '19, of Lebanon; Benjamin M. Tanaka, '20, of Ontario; Charles R. McColl, '16, of Tacoma, Washington; and Clinton H. Thienes, '23, of Pasadena, California.

Honorary memberships were given to Oliver M. Nisbet, Blair Holcomb, and Eugene W. Rockey. Although graduates from other schools, all were cited for years of devotion to the University of Oregon Medical Schools and to teaching physicians, now numbering in thousands, who have graduated from it. Special honor was accorded Howard P. Lewis, professor of medicine and chairman of the department of medicine. This was the Meritorious Achievement Award, presented to outstanding graduates of the medical school who have made outstanding contributions to medicine.

Straumfjord Elected President of Medical Board

At the conclusion of a three day regular meeting of the Board of Medical Examiners of the State of Oregon, Mr. Howard I. Bobbitt, Executive Secretary, announced that officers elected for the coming year are Jon V. Straumfjord, of Astoria, president, and David B. Judd, of Eugene, as secretary-treasurer. Dr. Straumfjord succeeds George H. Lage, who has been serving as president for the past three years.

It was further announced on Saturday, April 27, 1963, that 29 doctors qualified for licensure to practice medicine and surgery or osteopathy and surgery. Those who received licenses to practice medicine and surgery are:

Donald Keith Bohlman, Harvey Eugene Heidinger, Bryce Junior Young, Michael Shale Baskin, George Madison Burns, Nolan Ralph Cordon, Howard Edward Denbo, David Anthony Corey, Jackson Temple Crane, Frederick Duane Holcomb, Hugh Baker Johnston, Marvin George Jumes, William Alexander McCall, Jr., John Cameron McMillan, Dean Elton Neal, Donald Ellis Poage, Russell Nicholas Sacco, William Hyink Sack, James Darrell Shea, Raoul Lewis Weisman, James Oliver Slama, Roy Glenn Snodgrass, Alfonso Torres-Vincenzi, Russell Thomas Stodd, Robert Mark Vetto, and Charles Walton Emerick.

Lane County Medical Society

Regular meeting of Lane County Medical Society was held at the Eugene Hotel, April 2. Harry M. Nelson, of the Woman's Hospital, Detroit, discussed "Early Diagnosis of Pelvic Malignancies." He had just returned from the international cancer congress in Russia and related some of his experiences there.

Annual Golf tournament of Lane County Medical Society will be held at Shadow Hills Golf and Country Club, May 25.

There will be no general meeting of the Society in May. Next meeting will be June 7th, in conjunction with Trauma Day, at Sacred Heart Hospital. Election of a trustee to Oregon State Medical Society will be held at that time.

Annual Trauma Day at Sacred Heart Hospital, Eugene, will be devoted to injuries in automobile accidents. All physicians are invited to attend the meeting, June 7.

House of Delegates Acts on Major Issues of 1963 Midyear Meeting

House of Delegates dinner, Friday evening, April 26, at Hotel Multnomah.

The House of Delegates, at its 1963 Midyear Meeting, created a new committee under the Judicial Commission to be known as the *Committee on Quality of Patient Care* upon the recommendation of President Melvin W. Breese, and devoted an extensive period of discussion to the problems of the medical aid programs of the Public Welfare Commission. In addition to these major items of interest the House considered the reports of nine standing committees and the Board of Trustees of Oregon Physicians' Service. There were seven resolutions introduced by component societies which also claimed the interest of the delegates. In accordance with the Society's Bylaws, a Nominating Committee was elected to submit recommendations for the officers of the Society to be elected at the 1963 Annual Meeting.

A significant highlight of the meeting was the showing of a film in which Edward R. Annis, President-Elect of the American Medical Association, explained the "Operation Hometown" project. "Operation Hometown" is a program developed by the Council on Legislative Activities of the American Medical Association to promote grass roots action at the component medical society level against H.R. 3920, the King-Anderson Bill. The film will be used in the presentation of the "Operation Hometown" to representatives of component societies and their woman's auxiliaries at regional conferences throughout the State.

The House of Delegates was likewise privileged to hear an address by Mr. Aubrey Gates, Director of the Field Service Division of the American Medical Association, at the opening luncheon meeting of the closing session on Saturday, April 27th. Mr. Gates presented a comprehensive discussion of the "Status of Federal Legislation."

Another highlight of the meeting was the pre-

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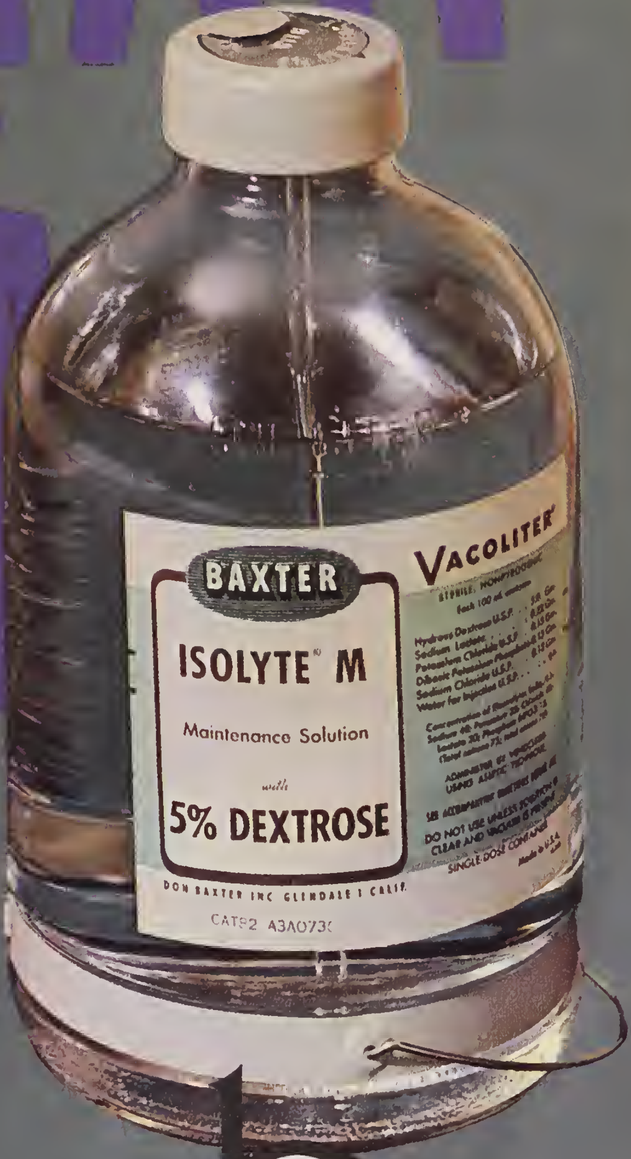
Dextrose Gm.	Milliequivalents					Calories	mOs.
	Na+	K+	CL⁻	Lact⁻*	$HPO_4^=$		
50	40	35	40	20	15	180	400

*Bicarbonate precursor



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sentation of the 1962 Grant of the American Medical Association Education and Research Foundation to the University of Oregon Medical School. The check in the amount of $18,189.16 was presented to Charles N. Holman, Associate Dean of the Medical School, by J. Scott Gardner, Chairman of the Subcommittee on AMA-ERF of the Society's Committee on Medical Education.

Election of Nominating Committee

The House of Delegates elected to the Nominating Committee: Leonard D. Jacobson of Eugene, as Chairman; Beverly A. Cope of Ashland; Stuart M. Lancefield of Salem; and Stanley A. Boyd and Verner V. Lindgren of Portland. The Committee will make recommendations for the consideration of the House of Delegates and the General Society at the 1963 Annual Meeting for the offices of President-Elect, Vice-President, Secretary-Treasurer, Speaker of the House of Delegates, a Delegate and Alternate Delegate to the American Medical Association and for a member on the Publications Committee.

The Nominating Committee held an organizational meeting during the House of Delegates session and will convene again on Saturday, June 8th, when it will consider recommendations solicited from component societies and the members of the House.

Quality of Patient Care

As a result of the emphasis President Breese is placing on the quality of patient care in his visits to component societies, the Multnomah County Medical Society introduced a resolution recommending the establishment of a standing committee in the Judicial Commission on the quality of patient care and the Committee on Revision of Bylaws introduced a bylaws revision creating such a committee. The House of Delegates, upon the recommendation of the Reference Committee on Reports of Officers and Committees, unanimously adopted both the resolution and the bylaws revision.

The duties and functions of the Committee, as they will be defined in the bylaws, read as follows:

The Committee on Quality of Patient Care shall:

(1) Stimulate and encourage individual members and component societies to be continuously concerned about the quality of patient care provided by physicians and in hospitals and related institutions within their area of jurisdiction.

(2) Consider, evaluate and make recommendations regarding all matters relating to the quality of patient care brought to its attention by members, component societies or from any other sources.

(3) Disseminate information to members and component societies regarding procedures, methods and activities which have been or may be utilized to advance the quality of patient care.

(4) Maintain appropriate relationships with the Oregon State Board of Medical Examiners, Oregon State Board of Health, University of Oregon Medical School and the Oregon Association of Hospitals in matters associated with the quality of patient care.

(5) Encourage each component society to establish a committee with like objectives and purposes.

Speaker of the House, Glenn M. Gordon, of Eugene

Welfare Medical Aid

The Committee on Charitable Medical Care presented for discussion by the members of the House of Delegates its recommendations which had previously been adopted by the Board of Trustees on February 2, 1963. These recommendations were considered at length in Reference Committee where they were amended and adopted by the House in the following form:

(1) That the practice of prorating reimbursements to physicians for services rendered to public assistance recipients should not be continued.

(2) That hospitals, nursing homes and physicians should be paid a reasonable fee for services rendered to public welfare recipients just as any other purveyor of services.

(3) That physicians in Oregon reaffirm the traditional principle that they will continue to care for patients eligible for public welfare benefits when sufficient welfare funds are lacking.

(4) That the State Public Welfare Commission should request adequate funds from

the State Legislature to support its medical aid programs and that the Society assist the Commission in presenting such requests at legislative committee hearings.

(5) That the Society cooperate with the State Public Welfare Commission in developing methods for the proper utilization of physicians' services.

In addition to these recommendations the House also adopted the following statements recommended by the Reference Committee:

(1) Nursing homes should be sufficiently compensated to provide adequate care.

(2) Hospitals should be compensated at actual costs for welfare patients so that private patients will not be taxed for the deficit.

Relative to the Medical Assistance for the Aged program, the House adopted a recommendation of the Committee on Charitable Medical Care that Oregon Physicians' Service be instructed to offer its services and submit a bid to the State Public Welfare Commission for the administration of the Medical and Surgical Benefits section of the program.

Action on Other Committee Reports

A number of other committee reports contained vital recommendations which were acted upon by the House. They are as follows:

1. From the Committee on Hospitals and Related Institutions:
   a. That component societies study and be prepared to express views and opinions regarding the Proposed Revision of the Rules, Regulations and Standards for Hospitals in Oregon being prepared by the Oregon State Board of Health and plan to express those opinions at regional hearings which are to be scheduled.
   b. That component societies give special attention to the care and services provided by nursing homes in their respective areas and cooperate with the Oregon State Nursing Home Association in its Nursing Home Accreditation program.
2. From the Report of the Committee on Public Policy:

   That the Committee on Public Policy be authorized to draft an appropriate resolution to be submitted to the Board of Trustees at its June 1963 meeting expressing the Society's opposition to the restrictions and policing of the use of experimental animals such as are proposed in S. 533.
3. From the Report of the Committee on Public Relations:

   That the Society accept the offer of assistance from the Division of Field Service of the American Medical Association in conducting regional conferences on the "Operation Hometown" program.
4. From the Committee on Mental Health:

   That the Statement of Principles on Mental Health of the American Medical Association be endorsed.
5. From the Committee on Diabetes Report:

   That the Committee collaborate with the Oregon Chapter of the American Diabetes Association in conducting the annual Diabetes Seminar, previously sponsored by the Committee independently.
6. The following recommendations of the Committee on Medical Education:
   a. That the House of Delegates continue to permit the Committee on Medical Education to hold an annual dinner and program for the graduating senior class of the University of Oregon Medical School, such a dinner and program to cost in the neighborhood of $300.
   b. That the House of Delegates continue to recommend and urge each component society of the Oregon State Medical Society to interest themselves in and devote themselves to the matters pertaining to recruitment programs such as has been advised and demonstrated in previous years.
   c. That the House of Delegates continue to authorize State Society assistance and financial aid to the Multnomah County Medical Society in the conduct of its program of regular meetings with interns and residents of the hospitals in Portland.

Resolutions

In addition to the Resolution introduced by the Multnomah County Medical Society recommending the establishment of a Committee on the Quality of Patient Care, six additional items of new business were introduced in the form of resolutions. They were:

Resolution No. 2 introduced by the Section on Ophthalmology and Otolaryngology related to the ethical principles involved in the dispensing of eyeglasses by ophthalmologists. This Resolution was amended by the Committee on New Business and submitted to the House in the following form and was adopted:

> WHEREAS, patients in Oregon are not protected by an opticianry act regulating dispensing opticians; and,
>
> WHEREAS, the Section on Ophthalmology and Otolaryngology is not aware of exploitation of patients by physicians presently engaged in dispensing eyeglasses; now therefore,
>
> BE IT RESOLVED that Oregon's delegates to the June, 1963 meeting of the House of Delegates of the American Medical Association be instructed to recommend that it is ethical for a physician to dispense glasses when it is done in the best interest of the patient and does not represent exploitation of the patient.

Resolution No. 3 introduced by the Jackson County Medical Society dealt with the relationship of NORTHWEST MEDICINE to membership in the Oregon State Medical Society. The Resolution which reads as follows was *not* adopted.

> WHEREAS, the Jackson County Medical Society has indicated a feeling that the publication of NORTHWEST MEDICINE does not fulfill a need in this area; and,
>
> WHEREAS, at a recent direct poll its membership voted overwhelmingly against continuing a mandatory subscription to the magazine; and,
>
> WHEREAS, the Society recommended that its support be placed on a voluntary basis; now therefore,
>
> BE IT RESOLVED that:
>
> 1. NORTHWEST MEDICINE be placed on a voluntary subscription basis rather than a mandatory basis; and,
> 2. An Oregon State Medical Society bulletin be circulated among the membership by the State Society office for the dissemination of Medical Society news on a monthly or semi-monthly basis.

Resolution No. 4 relating to poisonings resulting from prescription drugs was introduced by the Clackamas County Medical Society and reads:

> WHEREAS, physicians in the United States treat over half a million cases of poisoning annually; and,
>
> WHEREAS, many of these poisonings are due to the accidental or intentional ingestion of prescription drugs; and,
>
> WHEREAS, the need for a system of product identification has led to the development of various descriptive charts and illustrated manuals for proprietary drugs dispensed in capsule or tablet form; and,
>
> WHEREAS, various manufacturers producing the same drug will usually employ different tablet forms and capsule colors; and,
>
> WHEREAS, such identification systems do not account for the many liquid preparations; and,
>
> WHEREAS, many poisonings occur during night time hours after most pharmacies have closed; and,
>
> WHEREAS, prompt product identification is urgently needed in many cases of poisoning; and,
>
> WHEREAS, in daily office practice it often facilitates treatment of a patient to be able to identify drugs obtained under prior care; now therefore,
>
> BE IT RESOLVED that the Clackamas County Medical Society urges the Oregon State Medical Society and the American Medical Association to explore the possibility of sponsoring legislation at the federal level requiring the F.D.A. to assign a code number to all proprietary drugs and/or the principal active ingredient(s) of pharmacy formulations. That this code number shall appear on the bottle or package label carrying the physician's directions. That an index of these code numbers be published and distributed to all physicians' offices, pharmacies, hospitals, public health offices, and any other treatment centers. And that this index be kept up to date by the publication of quarterly or semiannual supplements.

The Reference Committee on New Business amended the resolve portion of the Resolution so as to read as follows:

> BE IT RESOLVED, that the Oregon State Medical Society encourage physicians to request that the name of the drug prescribed and the dosage be placed on the package.

The House of Delegates voted to refer the Resolution to the Society's Committee on Pharmacy and Drugs.

The Clackamas County Medical Society also introduced Resolution No. 5, the subject of which was "Assistance to Indigent Physicians". Upon the recommendation of the Committee on New Business, the House adopted the Resolution which reads:

> WHEREAS, it has come to the attention of the Clackamas County Medical Society that there is a physician applying for Welfare Aid in Clackamas County, Oregon; and,
>
> WHEREAS, it is logical to assume that the situation is also occurring in a number of other areas throughout the country; and,
>
> WHEREAS, it is difficult to define the stand of organized medicine against inclusion of self-employed physicians under Social Security under such circumstances; now therefore,
>
> BE IT RESOLVED that the Clackamas County Medical Society urge the Oregon State Medical Society and the American Medical Association to explore and develop means by which the profession can initiate a program to assist those of its members who become indigent.

The first of two Resolutions introduced by the Tillamook County Medical Society, Resolution No. 6, concerned the relationship of Society membership to Oregon Physicians' Service. The Resolution proposed that membership in the Oregon State Medical Society "become synonymous with membership in Oregon Physicians' Service and that the Society's officers take immediate steps to achieve this objective." The Resolution was amended by the Committee on New Business and adopted by the House in the following form:

> WHEREAS, through the past 30 years there has been a strong national trend toward socialized thinking and acting, this same trend consuming private enterprises as it goes; and,
>
> WHEREAS, the Federal Government is at the present time threatening the future of medicine as a private enterprise; and,
>
> WHEREAS, we are beset with closed panel

groups, these same groups becoming more prevalent with each ensuing year; and,

WHEREAS, it has been satisfactorily demonstrated that the independent carriers cannot stem the tide toward socialization and in themselves are a form of socialization; and,

WHEREAS, it has now been demonstrated that the Oregon State Medical Society presents an ununited and chaotic front in the field of prepaid medicine; and,

WHEREAS, it now becomes obvious that the Oregon State Medical Society must become a leader in the presentation of a strong united front, not only in the field of prepaid medicine, but in the care of our patients; now therefore,

BE IT RESOLVED that the members of the Oregon State Medical Society be encouraged to support and participate in Oregon Physicians' Service.

The second resolution introduced by the Tillamook County Medical Society recommended that the Society study the problem of more adequate care for the chronically ill. The resolution, which was adopted as presented, reads as follows:

WHEREAS, recently some of our learned colleagues on the national level have requested that we publicize any known cases where our citizens are not receiving proper care; and,

WHEREAS, each of us as members of the medical profession might examine the care presented to the chronically ill of this nation, and then ask ourselves if this care is adequate; and,

WHEREAS, there is a strong need to weigh the possibilities that such care may be at times restricted due to the extreme costs per patient as well as consuming extensive amounts of time on the part of the doctor; and

WHEREAS, it again becomes obvious that the Oregon State Medical Society should investigate thoroughly the possibilities of more adequate care for the chronically ill, both in the field of personal care as well as making available to these people adequate opportunities to provide insurance care through their own efforts; and,

WHEREAS, it also is obvious that it is humanly impossible to designate time limits to the bodily ill, we must also study the most efficient and economical way of giving aid to patients throughout their entire lifetime, completely disregarding time limitations; now therefore,

BE IT RESOLVED that the Oregon State Medical Society through proper committee efforts immediately begin the study of more adequate care of the chronically ill.

Mrs. J. Cliffton Massar Installed Woman's Auxiliary President

The Woman's Auxiliary to the Oregon State Medical Society at its 1963 annual meeting installed Mrs. J. Cliffton Massar of Portland as its 37th President. Mrs. Massar became President-Elect of the Auxiliary at its 1962 annual meeting and succeeds Mrs. Ian D. Macdonald of Salem to that office. She was installed by Mrs. E. Arthur Underwood of Vancouver, Washington, a Past-President of the National Woman's Auxiliary.

At the meeting, which was held at the Park Haviland Hotel in Portland, summaries of their highlight activities were presented by each of the component woman's auxiliaries and unique, at this meeting, reports from the Residents and Interns Wives and the Junior Woman's Auxiliary, composed of the wives of students at the University of Oregon Medical School.

At the annual election of officers Mrs. Guy R. McCutchan of Portland was selected as President-Elect and will succeed Mrs. Massar at the 1964 annual meeting. Other officers elected were: 1st Vice President, Mrs. Harvey W. Baker, Sherwood; Region 1, Vice President, Mrs. John L. Lang, Corvallis; Region 2, Vice President, Mrs. Everett E. Howard, Klamath Falls; Region 3, Vice President, Mrs. J. Robert Lee, Portland; Region 4, Vice President, Mrs. Elliott Harlow, Medford; Recording Secretary, Mrs. Karl M. Rottluff, Newport; Corresponding Secretary, Mrs. John W. Stephens, Portland; Treasurer, Mrs. D. J. Molenkamp, Portland; Auditor, Mrs. Alvin D. Wert, Portland; Historian, Mrs. Harold E. Davis, Portland; Parliamentarian, Mrs. Harry B. Moore, Portland; Directors (2-year term): Mrs. G. Prentiss Lee, Portland; Mrs. Merle Pennington, Sherwood; Directors (1-year term): Mrs. Donald G. Mackie, Grants Pass; Mrs. Frederick F. Rawls, Seaside.

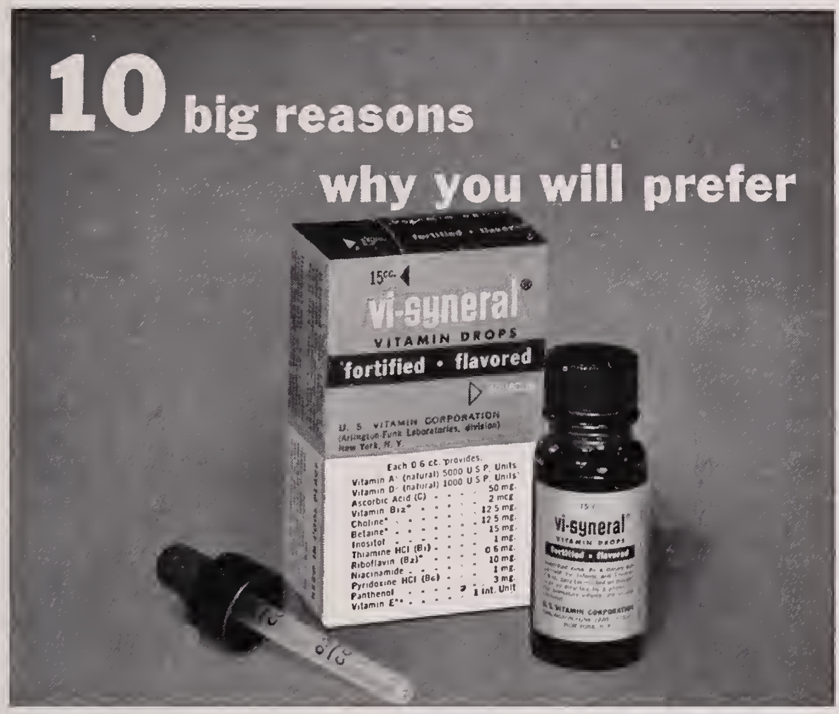
OBITUARIES

DR. CLEMENS HAYES, *57, of Tillamook, died January 11 of coronary occlusion and coronary atherosclerosis. He was born in Lane County, Oregon, and received his medical degree from University of Oregon Medical School in 1937. He practised in Tillamook for twenty years and at the time of his death was chief of staff of the Tillamook County General Hospital.*

DR. JESSE HAYES BALDWIN, *85, Corvallis, died January 9 of arteriosclerotic heart disease, encephalomalacia, and generalized arteriosclerosis. He was born in Kansas and received his degree from the University of Kansas School of Medicine in 1906. Dr. Baldwin served for 21 years as a medical missionary in China, and came to Corvallis in 1935.*

DR. HAROLD ROY LUCAS, *86, former professor at University of Oregon Medical School and staff member of Good Samaritan Hospital, Portland, died January 28 of congestive heart failure due to arteriosclerotic cardiovascular disease. Dr. Lucas earned his medical degree in 1904 from University of Illinois College of Medicine at Chicago and was licensed in 1920 after service in World War I. He practiced otolaryngology in Portland for many years.*

DR. ABRAHAM LEWIS OLSHANSKY, *76, died at Vancouver, January 11, of bronchopneumonia and pulmonary embolism. He obtained his medical degree from Albany Medical College of Union University, Albany, New York, in 1911. After serving as lieutenant colonel with the 27th Army Infantry Division during World War II, he came to Portland and joined the staff of the Veterans Administration regional office.*



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annual meeting September 15 - 18, 1963, Seattle

Child Psychiatry for Practitioners

A course in child phychiatry to be given at the University of Washington School of Medicine, July 25-27, will cover theory and practice in dealing with emotional disturbances of children and adolescents. The program will be presented in room D-209 of the Health Sciences Building.

Thursday, July 25

9:00 A Concept of Children's Disorders.
Raymond Sobel, M.D.
10:30 Case Demonstration (closed circuit TV)
Emotional Disturbance, Pre-School.
H. C. Wimberger, M.D.
2:00 Disturbed Mother-Child Relationships in Infancy. *Robert W. Deisher, M.D.*
3:15 Case Demonstration (closed circuit TV)
Juvenile Delinquency.
Nathaniel N. Wagner, Ph. D.

Friday, July 26

9:00 Discipline and Its Disorders
Adolph E. Christ, M.D.
10:15 Psychosomatic Disorders of Childhood.
Sherrel L. Hammar, M.D.
11:30 School Phobia and Underachievement.
Raymond Sobel, M.D.
2:00 The Obese Adolescent.
Sherrel L. Hammar, M.D.
3:15 Case Demonstration (closed circuit TV)
Initial Evaluation.
Herbert C. Wimberger, M.D.

Saturday, July 27

9:00 Office Psychotherapy (round table).
10:15 Treatment Facilities and Their Indications (round table).

Postgraduate Courses at U W

The following courses have been planned by the Division of Postgraduate Medical Education at the University of Washington School of Medicine. Details may be obtained from Mrs. Alice Steen, Room C-304, Health Sciences Building, University of Washington, Seattle 5, Washington.

Infections in Childhood	August
Anesthesia	September
Electro-Encephalography	October
Cardiology	October
Common Emergencies	November
Obstetrics and Gynecology	December

Southwest Washington AGP

Annual meeting of Southwest Washington Academy of General Practice was held in Vancouver, March 26. Speaker was C. Alvin Paulsen, of Seattle, who discussed "New Concepts with Regard to Male and Female Gonadal Disorders."

During the business meeting the following were elected to office:

James P. Donnelly, Longview, President; Robert B. Sullivan, Vancouver, Vice President; Allen C. Norman, Longview, Sec.-Treasurer; E. M. McAninch, Camas, Director (Two-Year Term); Dennis Seacat, Vancouver, Delegate (Two-Year Term); W. C. Kirkpatrick, Longview, Alternate (Two-Year Term).

It was announced the next meeting would be held at the Longview Country Club in June.

Richland Physician Honored

The William S. Knudsen award for outstanding contribution to industrial medicine was awarded, March 20, to W. Daggett Norwood, of Richland. Presentation of the bronze plaque was made at the

48th annual session of the Industrial Medical Association, in Washington, D. C. Dr. Norwood, Manager of the Department of Occupational Health, Hanford Atomic Products Operation, has been recognized for his work in identifying hazards of exposure to ionizing radiation.

OBITUARIES

DR. ROGER B. COGLON, *of Yakima, died of anaphylactic shock following penicillin injection, February 11. He was 74. He was a native of Ontario and received his premedical training at the University of Toronto. His medical degree was granted by the University of Illinois College of Medicine in 1931. He held commission in the Naval Reserve, during World War II, of lieutenant commander.*

DR. JAMES W. MOUNSEY, *of Spokane, died February 25, aged 65. Death was due to carcinoma of the prostate. He graduated from Creighton University School of Medicine in 1919 and was the first intern at Sacred Heart Hospital, Spokane. He practiced in Pasco from 1921 to 1926 when he moved to Spokane where he practiced proctology. He continued to work until two weeks before his death.*

DR. JOHN B. PORTER *of Seattle, aged 56, died February 6, of cardiac arrest during gastric surgery. He graduated from Creighton University School of Medicine in 1938 and interned at Providence Hospital, Seattle. His first practice was at Port Orchard but he also practiced at Cordova, Alaska, and Pomona, California. He had returned to Seattle recently. He served with the Army in Europe during World War II and was awarded a bronze star for work with the 30th Field Hospital.*

DR. WILLIAM A. MILLINGTON, *of Seattle, died February 1, of arteriosclerotic heart disease and congestive failure. He was 75. His medical degree was granted by Indiana University School of Medicine in 1910. He practiced in Seattle from 1924 to 1942 and after the close of World War II he worked for the Veterans Administration. He was in uniform in both wars.*

DR. JOSEPH W. EBERT, SR., *of Everett, died February 21, of terminal pneumonia after extended disability from Parkinsonism. He was 66. He graduated from Creighton University School of Medicine in 1921, took a residency in internal medicine at Rochester, Minnesota, and was licensed in Washington in 1925. He served in the Navy during World War I.*

DR. LAWRENCE H. MEADOWS, *of Seattle, died February 25, of coronary occlusion. He graduated from the University of Illinois College of Medicine in 1901. He was 85.*

DR. OLE ANDY NELSON, *of Seattle, died February 22, of metastatic carcinoma of the prostate. He was 81. Dr. Nelson was known throughout the country for his work in urology and had made many contributions, not only to medical literature but also to the design of a number of special instruments. His thirst for knowledge was insatiable and continued after he had retired from active practice. He continued to study in the library and at home until shortly before his death. He was a member of a long list of organizations, local, national, and international. He was active in all. It was characteristic of him that, when scheduled to deliver a paper in Mexico City a number of years ago, he concentrated on the Spanish language and within a few months became so fluent that at times he was taken to be a native of Latin America. He was born in Mosjoen, Norway but received all of his education in the United States. He received his B.A. from the University of Wisconsin and his M.D. from the University of Louisville School of Medicine, graduating in 1913. He served in the Army Medical Corps during World War I and came to Seattle in 1919.*

DR. FARIS M. BLAIR, *of Seattle, died February 24, aged 81. Death was due to coronary sclerosis and insufficiency complicated by auricular fibrillation. He graduated from the Medical College of Ohio, at Cincinnati, in 1909. He came to Washington in 1912, practicing at Concrete before moving to Seattle. He was a captain in the Army Medical Corps during World War I.*

BOOKS

RECEIVED: The following books have been received. Publication of this acknowledgement is to be considered adequate return to the sender. Selected titles will be reviewed as space permits.

Emergencies: casualty organization and treatment. Edited by T. Schrire, M.A., M.B. (Cape), F.R.C.S., Head, Casualty Department, Groote Schuur Hospital, Senior Lecturer in Surgery, University of Cape Town 366 pp. Illustrated. Price $15.50. Charles C. Thomas, Springfield. 1962.

Iron metabolism. By Thomas H. Bothwell, M.D., M.R.C.P., Tutorial Physician, Department of Medicine, University of Witwatersrand, Johannesburg, South Africa, and Clement A. Finch, M.D., Professor of Medicine, University of Washington School of Medicine. 440 pp. Illustrated. Price $15.00. Medical Book Department, Little, Brown and Company, Boston 6. 1962.

Specific and non-specific factors in psychopharmacology. Proceedings of a symposium held at the Third World Congress of Psychiatry in Montreal, Canada, June 4-10, 1961. Edited by Max Rinkel, M.D. 174 pp. Illustrated. Price $3.75. Philosophical Library, Inc., New York. 1963.

The growth of medical thought. By Lester S. King, M.D., Clinical Professor of Pathology, University of Illinois College of Medicine. 254 pp. Price $5.50. The University of Chicago Press, Chicago. 1963.

Heparin, metabolism, physiology and clinical application. By Hyman Engelberg, M.D., Attending Physician, Cedars of Lebanon Hospital, Los Angeles, California. 218 pp. Illustrated, Price $8.50. Charles C Thomas, Springfield, 1963.

Cancer of the uterus. By Carlo Sirtori, M.D., Director of the Morbid Anatomy Division of the National Cancer Institute of Milan, and Ettore Morano, M.D., Director in charge of the Tumor Center of the Ospedale Maggiore of Vercelli. 383 pp. Illustrated. Price $22.50. Charles C Thomas, Springfield, 1963.

Medicine and the state. By Matthew J. Lynch, M.D., and Stanley S. Raphael, M.B., B.S., Lond. 449 pp. Price $9.75. Charles C Thomas, Springfield, 1963.

New and nonofficial drugs 1963. Evaluated by Council on Drugs of the American Medical Association. Price $4.00. 902 pp. J. B. Lippincott Company, Philadelphia. 1963.

Intestinal biopsy. Ciba Foundation Study Group No. 14. Edited by G. E. W. Wolstenholme, O.B.E., M.A., M.B., M.R.C.P. and Margaret P. Cameron, M.A. 120 pp. Illustrated. Little, Brown and Company, Boston. Price $2.95. 1963.

Bilharziasis. Ciba Foundation Symposium. Edited by G. E. W. Wolstenholme, O.B.E., M.A., M.B., M.R.C.P. and Maeve O'Conner, B.A. 433 pp. Illustrated. Price $11.50. Little, Brown and Company. 1962.

Syllabus, AN Rh-Hr, the types and their applications. By Alexander S. Wiener, M.D., F.A.C.P., F.C.A.P.; Associate Professor, Department of Forensic Medicine, New York University Medical School; Senior Bacteriologist (Serology) to the Office of the Chief Medical Examiner of New York City; Attending Immunohematologist, Jewish and Adelphi Hospitals, Brooklyn, N.Y. and Irving B. Wexler, M.D., F.A.A.P.; Clinical Associate Professor of Pediatrics, University of New York Downstate Medical Center; Attending Pediatrician and Associate Immunohematologist, Jewish Hospital of Brooklyn; Associate Immunohematologist, Adelphi Hospital, Brooklyn, N.Y. 108 pp. Illustrated. Price $4.50. Grune & Stratton Company. 1963.

Atlas of human anatomy, an. By Barry J. Anson, Ph.D., (Med. Sc.) 632 pp. Illustrated. Price $18.00, W. B. Saunders Company. Philadelphia & London. 1963.

American drug index. By Charles O. Wilson, Ph.D., and Tony E. Jones, Ph.D. 819 pp. Price $6.75. J. B. Lippincott Company, Philadelphia 1963.

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Modern clinical psychiatry. By Arthur P. Noyes, M.D., Director, Psychiatric Education, Pennsylvania Department of Public Welfare and Lawrence C. Kolb, M.D., Professor and Chairman, Department of Psychiatry, College of Physicians and Surgeons, Columbia University. 586 pp. Price $8.00. W. B. Saunders Company, Philadelphia. 1963.

American speech for foreign students. By John W. Black, Professor of Speech, The Ohio State University, Columbus, Ohio. 258 pp. Price $8.75. Charles C Thomas, Springfield, Illinois 1963.

Medical genetics. By Widukind Lenz, Director of the Institute for Human Genetics and Professor of Genetics at University of Hamburg. 218 pp. Price $6.50. Illustrated. University of Chicago Press. 1963.

Neurology, textbook of. By H. Houston Merritt, M.D., Professor of Neurology, Neurological Institute, Presbyterian Hospital; Vice President in Charge of Medical Affairs and Dean of the Faculty of Medicine, Columbia University. 803 pp. Price $12.50. Ilustrated. Lea & Febiger, Philadelphia. 1963.

Lid and epibulbar tumors, treatment of. By Merrill J. Reeh, B.A., M.D., F.A.C.S. Director, Devers Memorial Eye Clinic, Portland, Oregon. 333 pp. Price $15.50 Illustrated. Charles C Thomas, Springfield, Illinois. 1963

Medical librarianship, principles and practice. By John L. Thornton, A.L.A., Librarian, St. Bartholomew's Hospital, Medical College. 153 pp. Price $4.75 Philosophical Library Inc., New York. 1963

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Lumbar discography. By John S. Collis, Jr., M.D., Department of Neurological Surgery, The Cleveland Clinic Foundation, Cleveland, Ohio. 173 pp. Price $12.75. Illustrated. Charles C Thomas, Springfield, Illinois. 1963.

Clinical metabolism of body water and electrolytes. By John H. Bland, M.D., Associate Professor of Clinical Medicine, and Director, Rheumatism Research Unit, University of Vermont College of Medicine. 623 pp. Price $16.50. Illustrated. W. B. Saunders Company, Philadelphia. 1963

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Medical laboratory technology. By M. J. Lynch, M.D. (N.U.I.), M.R.C.P. (Lond.), F.C.A.P.; S.S. Raphael, M.B., B.S., (Lond.), L. D. Mellor, L.C.S.L.T., F.I.M.L.T.; P. D. Spare, F.I.M.L.T.; P. Hills, L.C.S.L.T., F.R.M.S.; and M.J.H. Inwood, L.C.S.L.T., F.I.M.L.T. 735 pp. Illustrated. Price $12.00 W. B. Saunders Company, Philadelphia and London. 1963.

Accident surgery. Volume I. Edited by H. Fred Moseley, M.A., D.M., M.Ch. (Oxon.), F.R.C.S. (Eng. and Canada), F.A.C.S. Director of Accident Service and Surgeon, Royal Victoria Hospital; Associate Professor of Surgery, McGill University, Montreal; Hunterian Professor, Royal College of Surgeons of England. 242 pp. Illustrated. Price $10.00. Appleton-Century Crofts, New York. 1962.

Pediatric surgery. Second edition. By Orvar Swenson, Surgeon-in-Chief, The Children's Memorial Hospital, Chicago; Professor of Surgery, Northwestern University Medical School, Formerly: Surgeon-in-Chief, The Boston Floating Hospital for Infants and Children; Professor of Pediatric Surgery, Tufts University School of Medicine; Surgeon, Children's Hospital, Boston; Associate in Surgery, Harvard Medical School. 779 pp. Illustrated. Price $20.00. Appleton-Century Crofts, New York. 1962.

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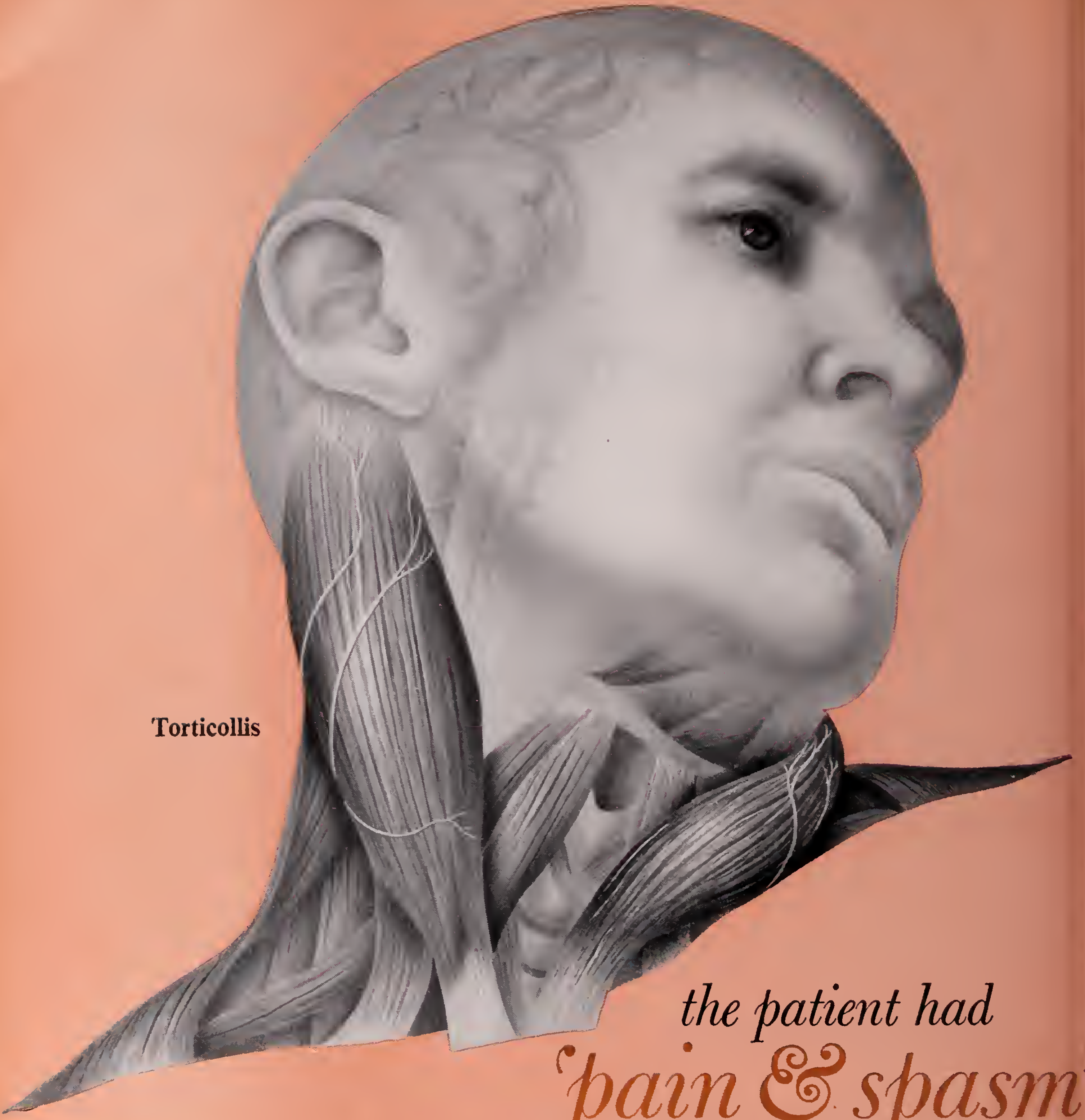

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References: 1. Truitt, E.B., Jr., Morgan, A.M., and Nachman, H.M.: South. M.J. 54:318, 1961.
2. Rogers, E.J.: Clin. Med. 8:701, 1961.

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A new boy on Hillside Street. By Ruth FitzSimons, speech therapist in charge of the school system in Warwick, R. I. 16 pp. Illustrated. Price $0.50. Springer Publishing Company, Inc., New York. 1962.

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Handbook of cardiology for nurses. Fourth edition. By Walter Modell, M.D., F.A.C.P., Associate Professor, Cornell University Medical College, Attending Physician, New York Veterans Administration Hospital, Attending Physician, Bellevue Hospital; Doris R. Schwartz, M.A., R.N., Assistant Professor, Out-Patient Nursing and Louise S. Hazeltine, M.A., R.N., Assistant to the Dean, both of Cornell University-New York Hospital School of Nursing, and Frederic T. Kirkham, Jr., M.D., Assistant Professor of Clinical Medicine, Cornell University Medical College, Assistant Attending Physician, The New York Hospital. 310 pp. Figures and graphs. Price $3.75. Springer Publishing Company, Inc., New York. 1962.

Medical resident's manual. By Frank B. Flood, Resident in Medicine; Research Fellow of The New York Heart Association at The St. Vincent's Hospital of the City of New York; Richard J. Kennedy, Associate Director of Medicine, The St. Vincent's Hospital of the City of New York, and William J. Grace, Director of Medicine, The St. Vincent's Hospital of the City of New York; Professor of Clinical Medicine, New York University School of Medicine. 311 pp. Figures. Price $4.75. Appleton-Century Crofts, New York. 1962.

Chemistry of the sex hormones. American Lecture Series. By Peter M. F. Bishop, D.M., (Oxon), F.R.C.P. (Lond.), Endocrinologist, Guy's Hospital, Senior Lecturer in Applied Physiology, Guy's Hospital Medical School, Endocrinologist to the Institute of Obstetrics and Gynecology (Chelsea Hospital for Women and Hammersmith Hospital), British Postgraduate Medical Federation, London. 100 pp. Figures. Price $5.75. Charles C Thomas, Springfield. 1962.

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Atherosclerosis: mechanisms as a guide to prevention. By Campbell Moses, M.D., Associate Professor of Medicine and Director of the Addison H. Gibson Laboratory, University of Pittsburgh, Pennsylvania. 239 pp. 54 illustrations. Price $8.00. Lea & Febriger, Philadelphia, 1963.

Primer of cardiology, a. By George E. Burch, M.D., F.A.C.P. Price $6.00. 228 illustrations. 336 pp. Lea & Febriger, Philadelphia. 1963.

Moral treatment in American psychiatry. By J. Sanbourne Bockoven, M.D., Superintendent, Cushing Hospital, Framington, Massachusetts; Chairman Committee on History of Psychiatry, American Psychiatric Association. Graphs. Price $3.00. Springer Publishing Company, Inc., New York, 1963.

Chemistry of thrombolysis: human fibrinolytic enzymes. By Kurt N. von Gaulla, M.D., Associates Professor of Medicine, Denver, Colorado. Price $12.75. Illustrated and graphed. Charles C Thomas, Springfield, Illinois. 1963.

Living with epileptic seizures. By Samuel Livingston, M.D. Price $6.50. Illustrated. Charles C Thomas, Springfield, Illinois, 1963.

Bronchial asthma, it's diagnosis and treatment. By Albert H. Rowe, M.D., M.S., and Albert Rowe, Jr., M.D. Price $11.00. Illustrated. Charles C Thomas, Springfield, Illinois, 1963.

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The anxious parent, the management of. By Ainslie Meares, M.D., B.Agr.Sc., D.P.M. 493 pp. Price $9.00. W. B. Saunders Company, Philadelphia, 1963.

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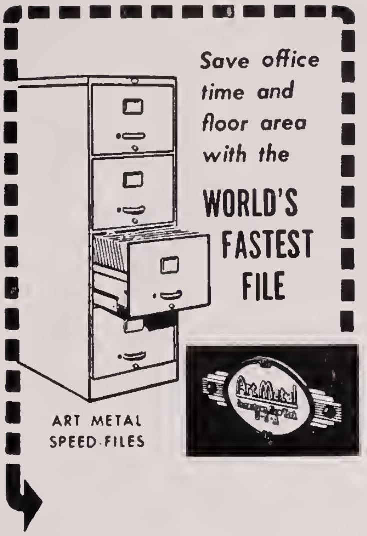

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Meetings OF MEDICAL SOCIETIES

AMA Annual—Atlantic City, June 16-20, 1963; San Francisco, June, 21-25, 1964, New York, June 20-24, 1965.

AMA Clinical—Portland, Dec. 1-4, 1963; Miami Beach, Nov. 29-Dec. 2, 1964.

American Association on Mental Deficiency, Portland, May 21-25, 1963.

Idaho State Medical Association—June 26-29, 1963, Sun Valley.

Northwest Soc. for Clin. Research—Jan. 10-11, 1964, Vancouver, B. C.
Pres., Denys K. Ford, Vancouver
Sec., R. E. Beck, Vancouver

Oregon State Medical Society—Sept. 25-28, 1963, Portland.

Pacific Northwest Obstetrical and Gynecological Association — June 3-5, 1963, Victoria, B.C.
Pres., R. R. de Alvarez, Seattle
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Washington State Medical Association—Sept. 15-18, 1963, Seattle.

West Coast Allergy Society, Dec. 5-7, 1963, Las Vegas, Nevada
Pres., M. Coleman Harris, San Francisco
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Ore. Acad. Ophth. & Otolar.—Portland Aero Club, 4th Tue., Sept.-May.
Pres., M. Harvey Johnson, Portland
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Oregon Dermatologic Society—Portland 2nd Wednesday (Nov., Jan.-Apr.)
Pres., Sheldon Walker, Portland
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Oregon Pathologists Association—Portland, 2nd Wednesday (Feb., Apr., Oct., Dec.)
Pres., F. L. Vrtiska, Corvallis
Sec., A. A. Oyama, Portland

Oregon Radiological Society—University Club, Portland, 2nd Wednesday through school year
Pres., L. A. Gay, The Dalles
Sec., G. R. Satterwhite, Portland

Ore. Soc. Obst. & Gynec.—Portland, Park Heathman, 3rd Fri. (Oct., Nov., Jan., May)
Pres., W. L. Hartmann, Portland
Sec., T. A. Treanor, Portland

Oregon State Society of Anesthesiologists—Portland, 3rd Friday (except June, July, Aug.)
Pres., J. A. Siebs, Eugene
Sec., P. E. Schaff, Portland

Oregon Urological Society—Quarterly Meetings, University Club, Portland
Pres., T. A. Davis, Portland
Sec., G. W. Schwiebinger, Portland

Portland Academy of Hypnosis — 3rd Monday (Sept.-May) Aero Club
Pres., V. P. Shoemaker
Sec., M. S. Skiff

Portland Academy of Pediatrics—1st Monday
Pres., W. M. Clark, Jr.
Sec., J. W. Bussman

Portland Surgical Society—last Tuesday (Sept.-May), UOMS Library
Pres., H. Minor Nichols
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Puget Sd. Acad. Ophth. & Oto.—3rd Tues. (Oct.-May) Seattle or Tacoma. Annual—Seattle, Jan. 17, 18, 1964.
Pres., H. L. Maier, Tacoma
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Seattle Academy of Surgery—3rd Wed. bi-monthly; Seattle Yacht Club.
Pres., E. B. Parmelee
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Seattle Gyn. Soc.—3rd Wed. exc. June, Aug., Dec., Feb.
Pres., D. M. McIntyre, Seattle
Sect., E. T. MacCamy, Seattle

Seattle Pediatric Society—3rd Friday (Sept.-May), College Club
E. J. Wollenweber, Seattle
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Seattle Surg. So.—4th Mon. (Sep.-June) Annual—Seattle, Jan. 24-25, 1964.
Pres., Eric Sanderson, Seattle
Sec., R. C. Coe, Seattle

Spokane Society of Internal Medicine—Quarterly, Rockwood Clinic
Pres., Robert Berghan
Sec., Richard E. Steury

Tacoma Academy of Internal Medicine —4th Tuesday (Sept.-May)
Pres., R. A. Kallsen
Sec., R. A. O'Connell

Tacoma Surgical Club—May 2, 1964, 3rd Tuesday (Sept.-May)
Pres., Dumont Staatz
Sec., Robert B. Burt

Washington Academy of Clinical Hypnosis—3rd Friday (Sept.-June)
Pres., Edward G. Goodrich, Ph.D., Seattle
Sec., John E. Nelson, Seattle

Washington State Obstetrical Associa-October 12, 1963, Yakima.
Pres., R. K. Plant, Seattle
Sec., F. LeCocq, Yakima

Washington State Radiological Society —Seattle, 4th Mon., (Sept.-Apr.) Business Session, Meany Hotel, Scientific Sn. UWSM X-ray Dept.
Pres., W. A. Chesledon, Seattle
Sec., R. H. Rosenberg, Seattle

Wash. St. Soc. of Anesthesiologists
Pres., M. W. Bulmer, Wenatchee
Sec., Robt. M. Kintner, Wenatchee

Washington State Society of Internal Medicine—Sept. 18, 1963
Pres., D. M. Ulrich, Seattle
Sec., J. H. Lindberg, Seattle.

Yakima Obstetrical and Gynecological Society—Last Monday (except July, Aug., Dec.)
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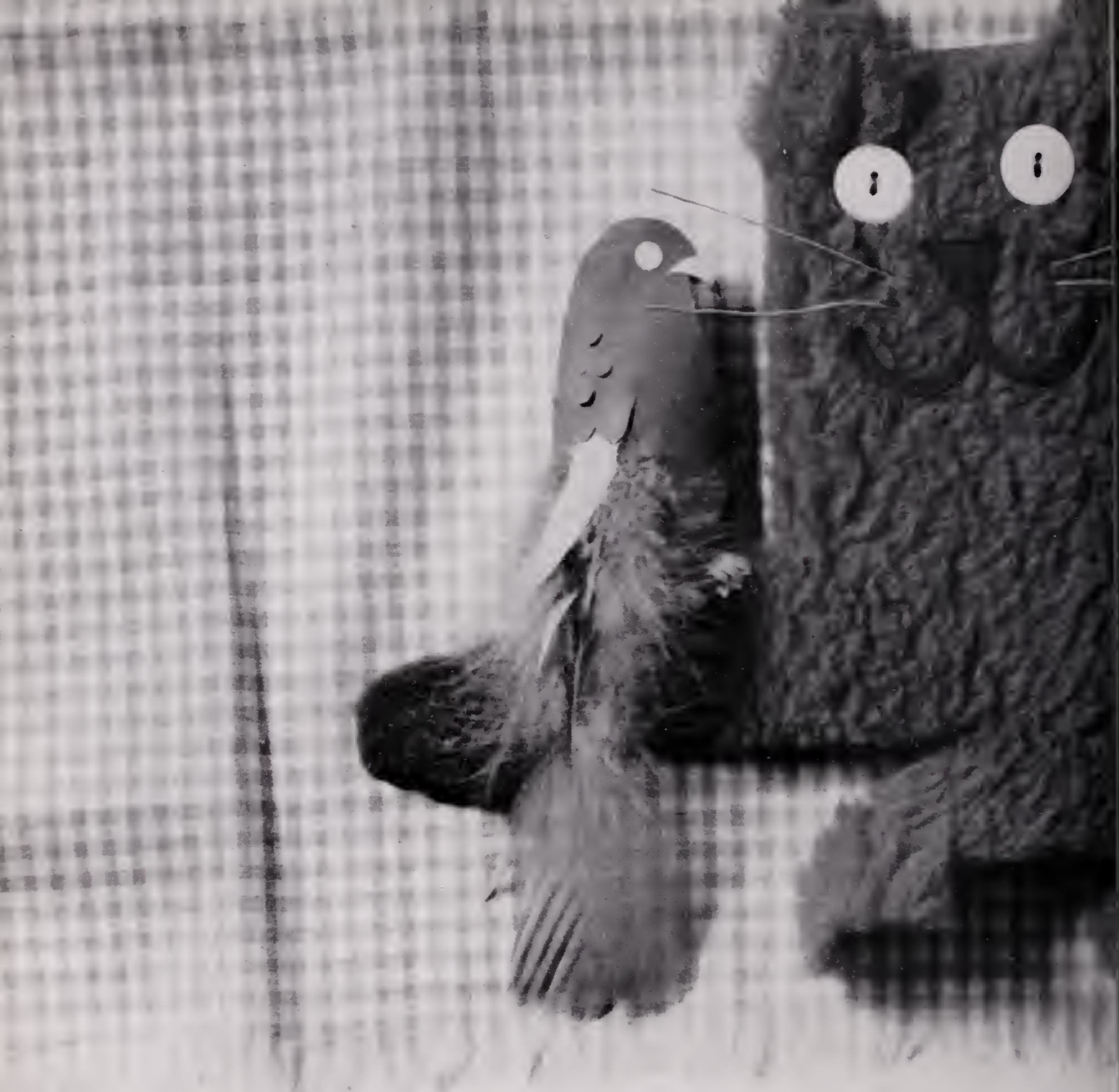

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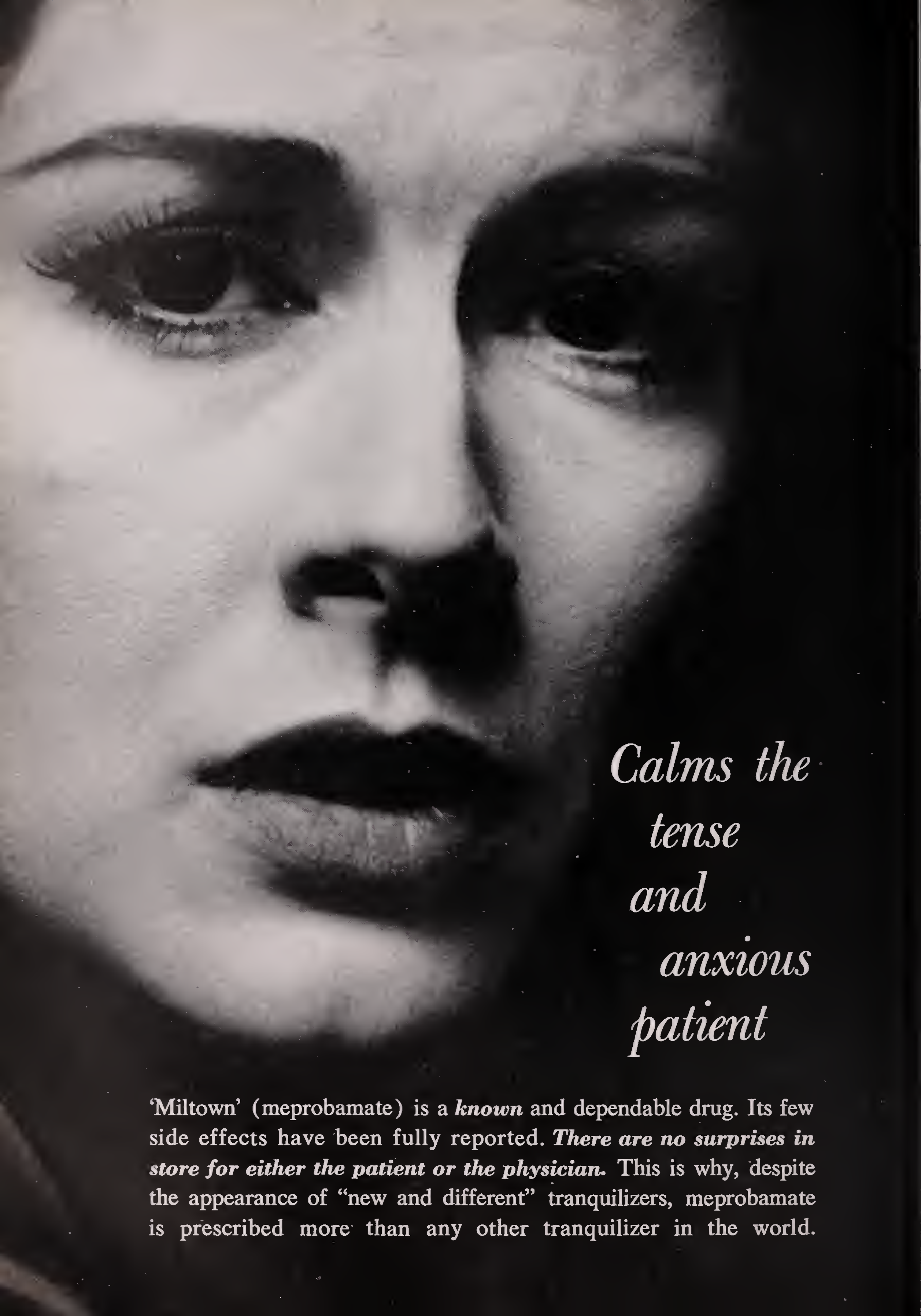
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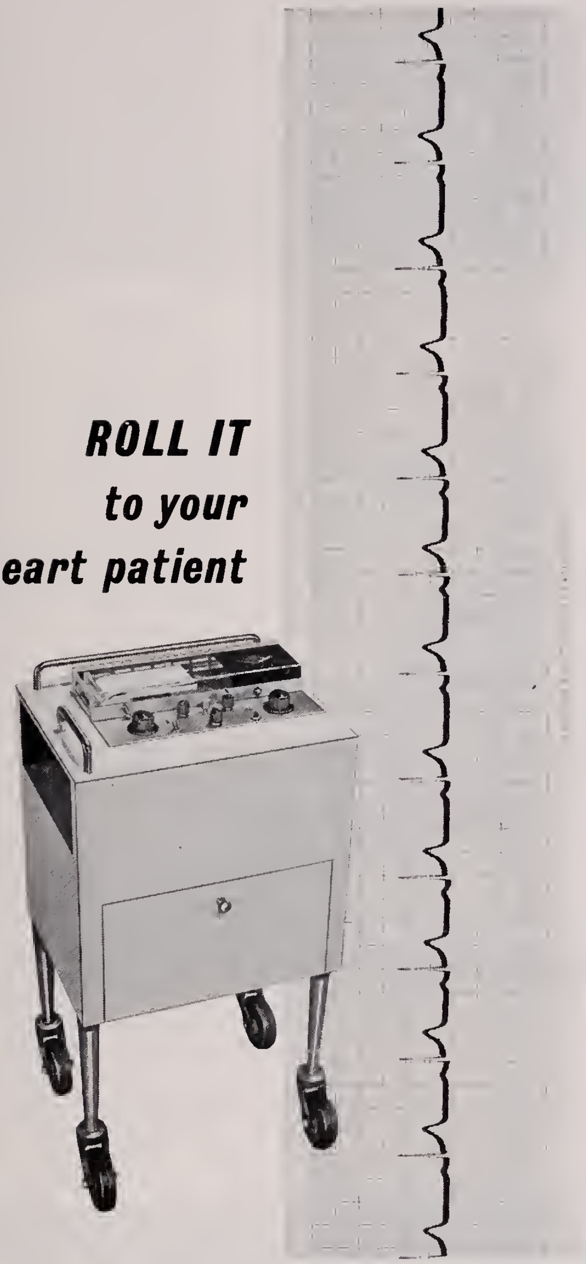

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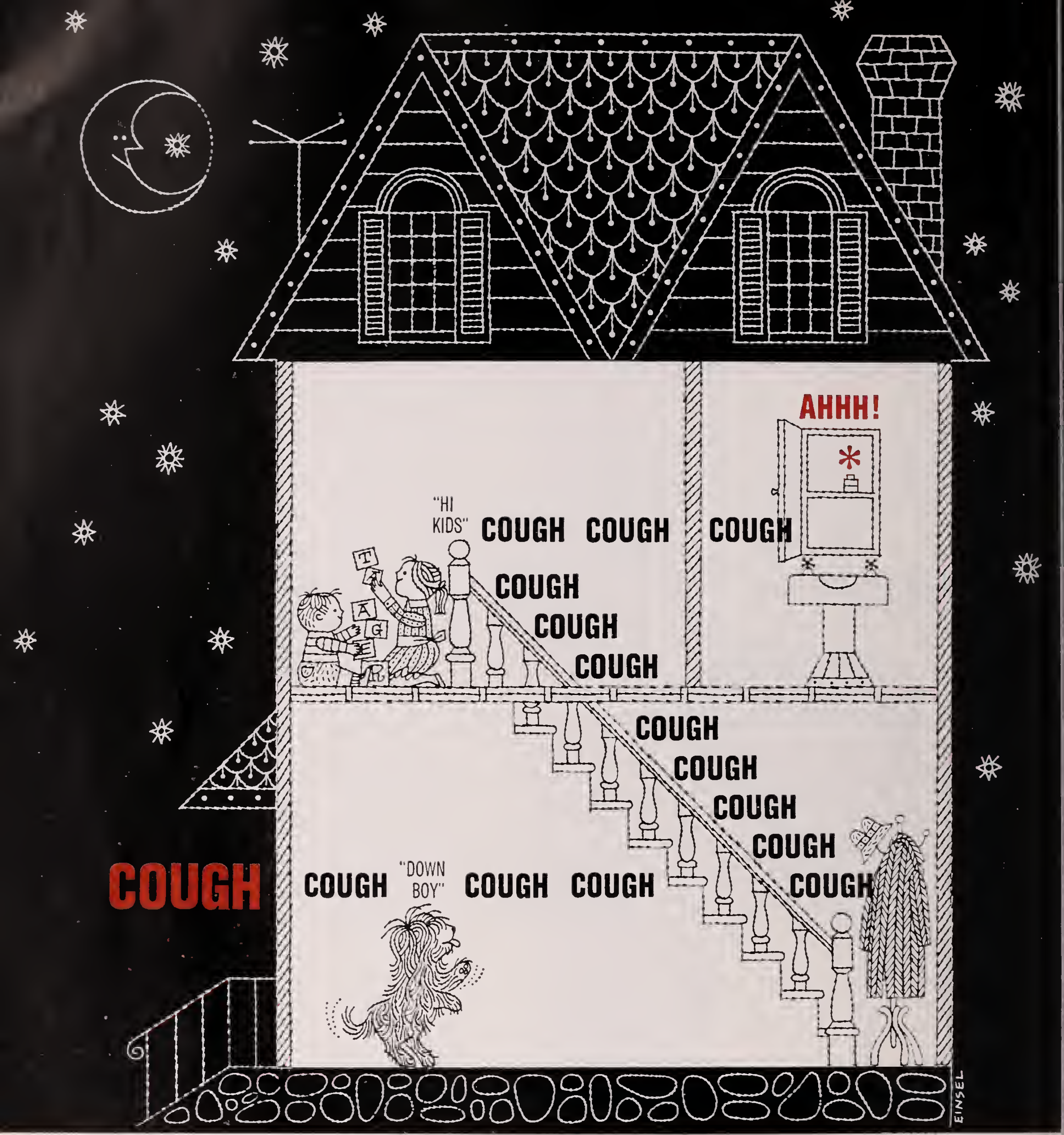

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Attention, aviation medical examiners

Editor, Northwest Medicine

I appreciate the opportunity to address this letter to the more than three hundred physicians in the states of Oregon, Washington and Idaho who have been designated by the Federal Aviation Agency as Aviation Medical Examiners. By virtue of being designated, these physicians have indicated their interest in aviation medicine, or some of the facets of aviation medicine. Those designated examiners who are not now members of the Aerospace Medical Association and its civilian component, the Civil Aviation Medical Association, should join both organizations without fail. These societies are the largest and most representative professional organizations devoted to aviation medicine in this country. Their membership is composed of medical specialists, life scientists, and engineers in the fields of aerospace medicine and astronautics. Both organizations are primarily concerned with the medical aspects of flying and the adaptation of man to flight. They have supported civil aviation medicine in the establishment of aviation medical service, and have fostered the Civil Air Surgeon's position in the Federal Aviation Agency.

The Aerospace Medical Society publishes a monthly journal. The Civil Aviation Medical Association prepares a quarterly newsletter which may soon be monthly. These publications keep the designated examiner informed in aviation medicine and in Federal Aviation Agency medical policy and procedure. This latter is most important now that the Federal Aviation Agency has discontinued publication of its quarterly newsletter.

The membership fees are nominal. Both organizations need your support and have much to offer you as a designated examiner. I will be glad to forward membership applications and further information upon request.

Yours very truly,

J. HAROLD BROWN, M.D.
718 4th & Pike Bldg.
Seattle 1, Washington

What's in a name?

Editor, NORTHWEST MEDICINE:

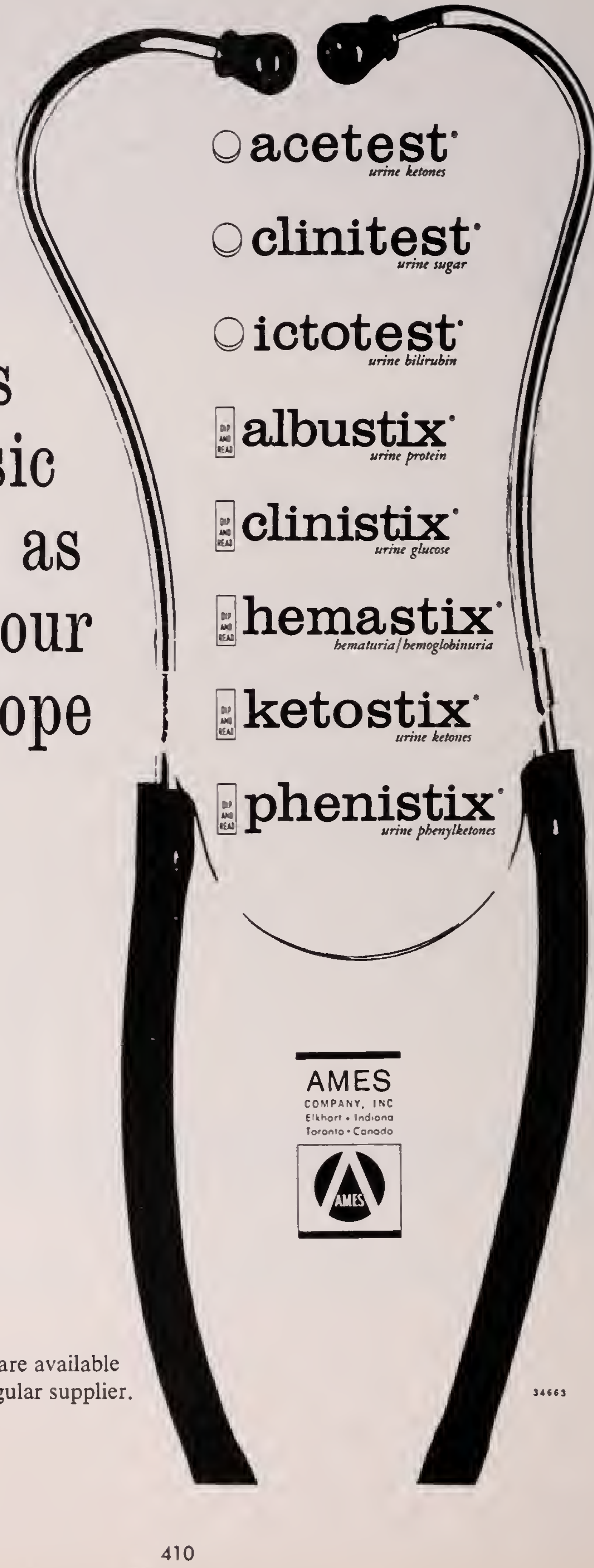
This is in reply to your comments attached to my letter as published in the April issue.

To disapprove of a name or a change in name is anyone's right and privilege. I'm not sure I think Children's Orthopedic Hospital and Medical Center is the best name either. However, to extract implications that are not implied is to look more deeply for controversy than is justifiable.

Webster's definition of "center" as is applicable to this situation is as follows: "The middle part of anything—especially something or some place considered as the middle of activity of some specified kind, as, a railroad, art, medical center . . ." The designation of a place as an art center in no way implies that the place paints pictures; the designation of a hospital or place as a medical center in no way implies that the place practices medicine.

It does imply that the place offers laboratory facilities, equipment, beds and other resources which the physicians may use to practice medicine, and which will enable the physicians to more adequately diagnose and treat patients who present themselves to the physicians at the Center. The designation Medical Center further implies that the hospital hopes to continually expand its facilities to enable the physicians to provide diagnostic and therapeutic care over and above that which is provided in the ordinary hospital.

JACK M. DOCTER, M.D.
MEDICAL DIRECTOR



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For complete details on indications, dosage, administration, and clinical background, see the brochure of this product available on request from Mead Johnson Laboratories, Evansville 21, Indiana.

References: (1) Clarkson, I. S., and Le Perc, D. M.: Angiology *11*:190-192 (June) 1960. (2) Kaindl, F.; Samuels, S. S.; Selman, D., and Shaftel, H.: Angiology *10*:185-192 (Aug.) 1959. (3) Kaindl, F.; Pärtan, J., and Polsterer, P.: Wien. klin. Wchnschr. *68*:186-191 (March 16) 1956. (4) Samuels, S. S., and Shaftel, H. E.: J.A.M.A. *171*:142-145 (Sept. 12) 1959. (5) Billiottet, J., and Ferrand, J.: Semaine méd. *34*:635-637 (May 20) 1958.

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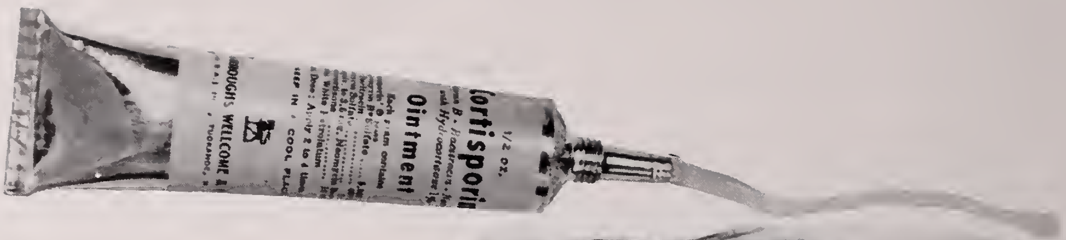

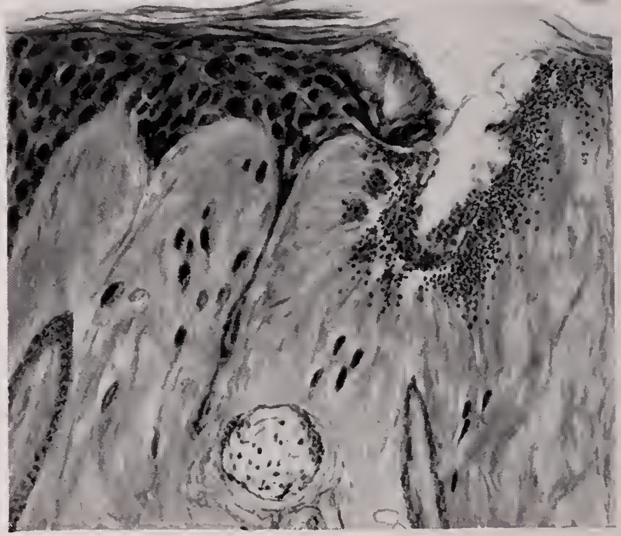

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REFERENCES: (1) Baker, A. G.: Penn. Med. J. *63*:697 (May) 1960. (2) Smith, R. T.: New York Med. (Aug. 20) 1952, pp. 16-19. (3) Smith, R. T.: Med. Clin. N. Amer. (Mar.) 1957. (4) Lehrer, H. W.; Lehrer, H. G., and Lehrer, D. R.: Northw. Med. (Nov.) 1955. (5) Sforzolini, G. S.: Arch. Ophthal. *62*:381 (Sept.) 1959.

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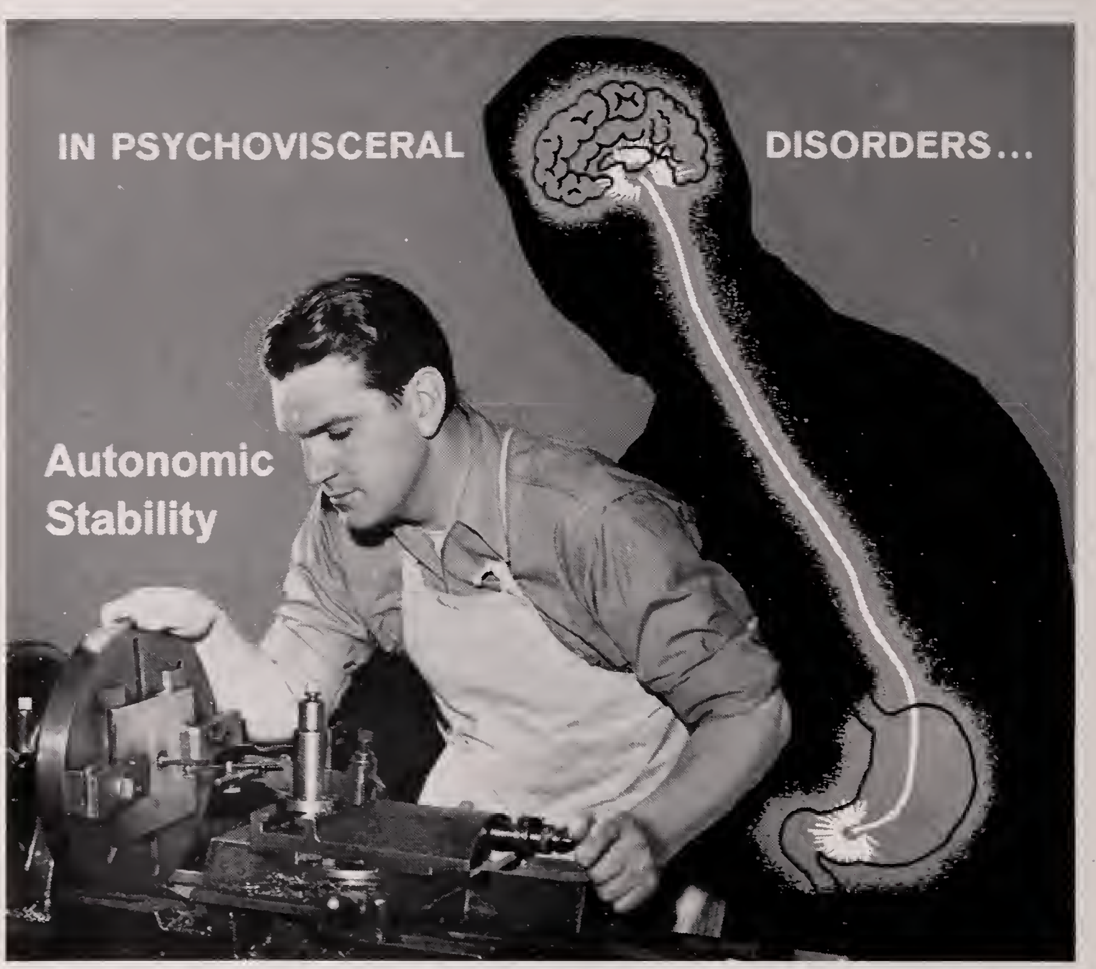

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Research in the Service of Medicine

Practitioners and Teachers

One of the unfortunate facts of medical life in the United States is that those who practice medicine and those who teach in medical schools do not understand each other. What is even worse, they sometimes do not respect each other. As is so frequently the case in matters medical, these misunderstandings and failures to appreciate seldom pertain to individuals but usually apply to classes. The practitioner likes and admires the professor but mistrusts the faculty. The professor appreciates the skill of the practitioner but has no faith in the practicing profession.

Two years ago, one of the nation's most scholarly professors was a witness for the Kefauver Committee. He expressed lack of confidence in practicing physicians. He said that leaving judgment of efficacy of drugs to them had been the source of much, if not most, of the errors in comprehension of disease and in adherence to many long outmoded and discarded forms of treatment.

Similar attitude is expressed in an editorial published in the January-February issue of *Clinical Pharmacology and Therapeutics.* It was signed by Dale G. Friend, of Peter Bent Brigham Hospital, Boston. In proposing a national prescription formulary he says that it is "utterly impossible for the practicing physician to have enough information to select the drugs he uses in the treatment of his patients wisely."

He negates his own argument in the next sentence by deploring influence on the practitioner by detail men, journal advertising, direct mail articles and news media publicity. But paucity of sources is not his major concern. He feels that a committee of experts should select the useful drugs for physicians. He suggests that the committee be composed of "authorities" all of whom would be members of various official or semi-official organizations. There would be no place for anyone who actually practiced medicine. Favorable consideration would be given to the products of certain manufacturers. Relative merits of each drug would be included so the physician would know what he ought to prescribe.

It is obvious that this type of thinking is based on the concept of vast central authority in control of every segment of society. The physician is too ignorant or too careless to select the best drug for his patient—therefore an authoritative group should do it for him. The manufacturer is too greedy for profit and too dishonest to be trusted—therefore he must be controlled by a regulatory body and only those behaving properly are to be recognized.

This philosophy is bad enough and ought to be shown in its true colors but it goes far beyond the problems arising between the practicing profession and those who teach in the medical schools. It is pointed out here only to focus attention on a situation that should not exist and does not need to exist.

It is obvious beyond any question whatever that most professors in medical schools are extremely able teachers who have great pedagogic skill and that they are dedicated to promoting scientific medicine of the highest possible quality.

It is equally obvious that most practicing physicians are extremely able healers who are delivering the best medical care the world has ever known and that they are doing so with an art relatively unknown to the professors. Unfortunately, it is also unappreciated and, perhaps, not even understood.

Finally, it is painfully obvious that medicine, if it is to continue its greatness, must have the benefit of both kinds of skill. Those who produce and disseminate knowledge cannot deliver it to any important extent because their time must be assigned to other pursuits. They must provide the science used by those who deliver it with their art. Each has knowledge and skill unavailable and unnecessary to the other. Why do they not trade respects?

More Women In Medicine?

Although the number of women applying for admission to medical schools has not increased during the past ten years, the percentage admitted has risen. In 1950 there were 1,231 applicants and 385 or 31.3 per cent were admitted. In 1960 the numbers were 1,044 and 600 or 57.5 per cent admitted.

Percentage of total admissions has also risen. In 1950 women constituted 5.3 per cent of total admissions and ten years later the figure had risen to 7.0 per cent. Percentage of women graduates during the same ten year period has remained relatively constant at 5 per cent.

These figures do not seem to indicate any very important trend, and are not very helpful except to dispel the idea that there has been discrimination in favor of male students. Their admission percentage was 32.6 in 1950 and 59.6 in 1960, approximately the same as the figures for women.

Discrepancy of considerable proportion does show up, however, when it comes to comparing numbers of medical graduates with those earning baccalaureate and first professional degrees. In 1953 there were 304,857 such graduates, 34.1 per cent of whom were women. Of this number, 6,600 graduated in medicine but only 5.5 per cent of the medical degrees were granted to women. By 1961 the total had risen to 401,784 but medical graduates numbered only 6,994. Percentage of women remained about the same in total and in medical graduates.

Whether or not there will be a development toward Canada's 12 per cent of women graduates in medicine, or Britain's 24 per cent, the figures tend to support the idea that there is need for more medical schools, or expansion of existing schools, or both. Data are from a report issued by the Association of American Medical Colleges. ■

guest editorial:

Who Will Meet the Need?

K. K. SHERWOOD, M.D., General Superintendent, King County Hospital, Seattle, Washington

Much has been written about the medical problems of the senior citizen. Most of the professional writing about the individual over 65 has had for its subject matter the financial aspect of his medical care or the physical management of his infirmities. In the latter field, medicine can be proud of the great advances made in the treatment of degenerative diseases of the heart, of senile diabetes, of vascular disease, and of orthopedic conditions. These laudable advances are very much appreciated by our patients over 65.

But there exists a great therapeutic void. The discipline—medical, social, or governmental bureaucracy—that fills this void will control the management of all the health problems and probably the free time activities of the retiree. Few of us appreciate the problems that face the senior citizen in the social and motivational fields. He has been told he is too old to work. As proof of this, against his will he is retired. He receives not a salary, but is given a pension. Formerly his major usefulness to his community has been through his job. We have then, an individual who believes it proven that he is too old to work, yet the retiree knows of no other means through which his existence can continue to be a happy experience. He senses, though he may not know, that only as he continues to be useful to his community does he achieve the inner satisfaction, the happiness that makes living worthwhile. A worthwhile purpose for living must be acquired by the retiree. At the present time no one is making this needed contribution to our senior citzens' happiness. Is there any doubt that the discipline that supplies this great lack in the lives of our senior citizens will dominate the fulfillment of his other needs?

It is much easier to write a prescription than to supply motivation. Can the medical profession do the difficult? It has in the past. Can the medical profession encompass not only the structural, not only the physiological, but also the social in their varied disciplines and knowledge?

If we doctors can rise to this challenge and fill this therapeutic void we will achieve much. We will make the functional and structural treatment of the senior citizen much easier than it now is. Our patients will be champing at the bit to get well. Equally important, we physicians will have demonstrated to the senior citizens and to their sons and daughters that the medical profession is the discipline to which they may turn for the fulfillment of not only their physical, not only their physiological, but also their emotional-social needs. If the medical profession thus fills this therapeutic void, this absence of motivation for living, who needs to worry about government medicine?

CONSTITUTIONAL AMENDMENT—WSMA

PROPOSED AMENDMENT TO ARTICLE IV, SECTION 3 (b) OF THE CONSTITUTION OF THE WASHINGTON STATE MEDICAL ASSOCIATION
ARTICLE IV—COMPONENT SOCIETIES

Section 3. Issuance of Charters.

(b) After the issuance of the charters provided for immediately above, the Board of Trustees, with the approval of the House of Delegates, may charter as a component society a medical society representative of the medical profession of a county as circumstances may dictate or as seems desirable. No charter shall be issued with respect to a county in which a component society previously chartered has territorial jurisdiction ((except)); **provided, however, the Board of Trustees may create a state-wide component society on an interim basis only to implement the merger of the Washington State Osteopathic Association into the Washington State Medical Association; provided, further,** that whenever an increase in membership warrants, an additional component county society may be chartered within the previous territorial jurisdiction of an existing component society composed of two or more counties.

V. W. Spickard, M.D., Chairman,
Committee on Revision of Constitution
and By-Laws

This amendment will be submitted for final acceptance by the House of Delegates at the WSMA meeting, September 15-18. (See page 77, January, 1963 issue.)

ON ILLNESS

For reasons that I cannot quite pin-point I find myself turning to the subject of *illness.* Probably it is nothing more than the unconscious concern of the physician with his ancient and eternal enemy. Each of us as a physician comes to acquire an instinctive knowledge of illness, and to realize what it is when we speak to it in its human form. As the years go on such knowledge helps us, for one thing, to avoid fumbling for some commiserative formula when confronted by some poor soul in the grip of an experience which has all but overwhelmed him. In many people illness appears as lean, strained and astringent. In others the same illness breeds an acute awareness of life in all its aspects. You simply cannot treat things casually when it appears that you are seeing them for perhaps the last time. In still others the effect is to produce a dour silence; the individual retreats into the central fastness of his being, and simply does not want to be told whether his illness is fatal or not. He himself knows what the issue is.

E. P. Scorlett, M.D., in his column in Group Practice,
Journal of the American Association of Medical Clinics

NEPHROTIC SYNDROME
a classic example of the effectiveness of
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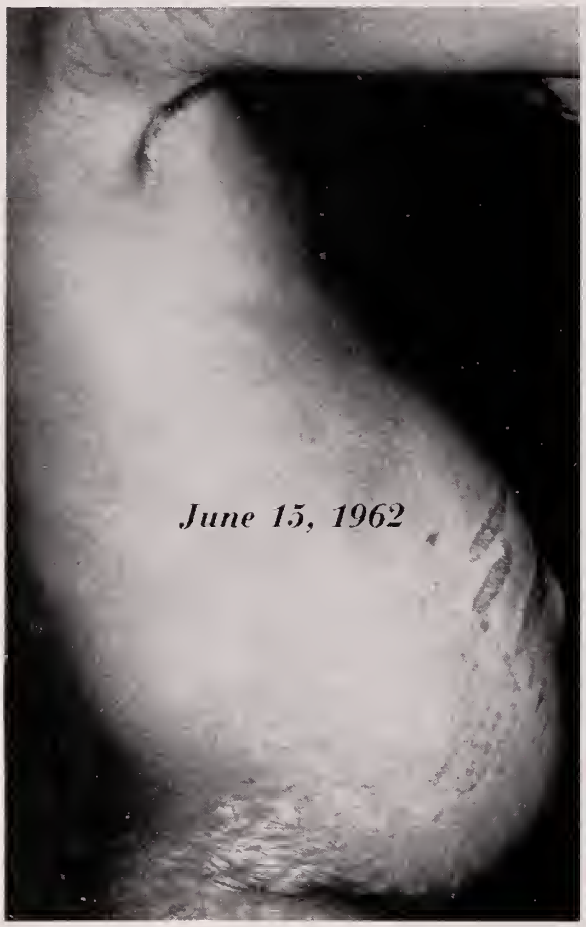
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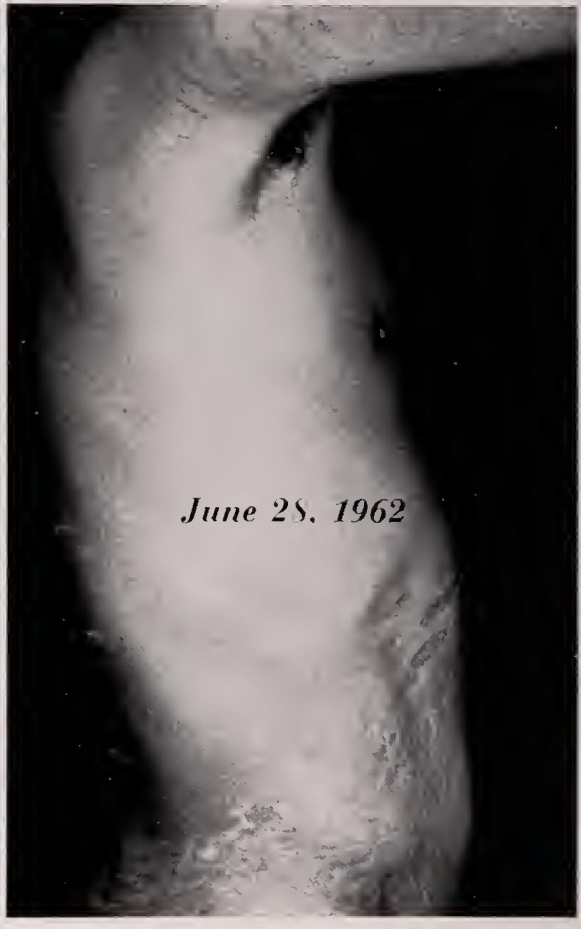
June 28, 1962

Patient was admitted with nephrotic syndrome, evidenced by ascites, peripheral edema, proteinuria, hypoproteinemia, and hypercholesteremia. Treatment with Haldrone, 4 mg. every six hours, was begun on May 28, 1962, and seven days later the dosage was increased to 6 mg. every six hours. A brisk diuresis occurred on June 17. The amount of Haldrone was then reduced to 2 mg. every six hours. On June 27, the patient reached a dry weight of ninety-seven pounds (a forty-six-pound loss since the beginning of treatment), and he was discharged as satisfactory on July 4, 1962. He has since been maintained in remission on 2 mg. Haldrone t.i.d.

In summary: Haldrone is a corticosteroid useful in collagen diseases, allergic diseases, certain dermatological disorders, certain hematological diseases, and other steroid-responsive conditions. Side-effects reported have included rounding of the face, ecchymosis, insomnia, weight gain, hypertrichosis, thinning of the skin, peptic ulcer, occurrence of infections, and increased appetite. This steroid should not be used in patients with active or suspected tuberculosis, active peptic ulcer, psychosis, or herpes simplex of the eye. Dosage should be based carefully on such factors as the severity, prognosis, and duration of a given illness.

Supplied in 1-mg. (Yellow) and 2-mg. (Orange) scored tablets, in bottles of 30, 100, and 500.

Additional information available upon request. Eli Lilly and Company, Indianapolis 6, Indiana.

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Main Street and the Academic Critic

WILLARD M. PETERSON, M.D. Twin Falls, Idaho

> *—the individual physician appears to have neither the inclination nor the courage to enter the fight to preserve the private practice of medicine.*
>
> George J. Burgess*

> *Goe and catche a falling starre—*
> *And find what wind*
> *Serves to advance an honest mind*
>
> John Donne**

> *Each of us is all the sums he has not counted—*
> *The seed of our destruction will blossom in the desert*
> *And the alexin of our cure grows by a mountain rock.*
> *Our lives are haunted by a Georgian slattern*
> *Because a London cut purse went unhung—*
> *And each moment is the fruit of forty thousand years.*
>
> Thomas Wolfe***

> *For it is written down for all to see*
> *That he who is whored by fashion*
> *Will be whored by time.*
>
> Thomas Wolfe****

This writer has impatiently awaited answers to Dr. Lyman's article in the October issue of Northwest Medicine on the socialization of two professions. I had hoped that pens more politic than mine would rip to shreds the siren song argument of "Come join us for it is not so bad after all." But the response has been limited to one brief letter of protest, and the article by O. B. Scott in the February issue.

The article was a bitter dose for me to swallow for I had read with admiration and respect a previous article by Dr. Lyman on some of the failures of progressive education.[1] At about the same time the October article appeared, two gentlemen, one teaching administrative medicine at Harvard and the other at Cornell, took private practice to the woodshed through the newspapers and weekly news magazines. And one of our eastern colleagues in private practice aggravated our wounds by self righteously delivering us into the hands of the enemy in a pictorial magazine consistently unfriendly in its attitude toward private practice.

past the point of complacency

Apparently my medical and surgical colleagues have been too busy with meetings, with clinical and scientific problems, to answer Dr. Lyman's smooth discourse on the evolution of educational and medical paradoxes in our world, complicated by war and threat of war, the class and race struggle and our Frankenstein, nuclear fission. But of course it is more than time, the busy physician's greatest enemy, or Dr. Lyman's talent, which has discouraged the pens which should have been busy. The private practitioner has tried to stay out of large controversies not because of lack of courage but because he could not engage in these open controversies honestly without alienating many of his patients. However, the struggle has passed the point where we in private practice can save ourselves with prudence.

---

*From, A Layman's View, guest editorial, Northwest Medicine, June, 1962

**From, Song, a short poem.

***From, Look Homeward Angel.

****From, You Can't Go Home Again.

Without the taunt that we are a profession of frightened Philistines I might have delayed this reply for another day. As for the cowardice implied, this I deny again—the militant Doctor is still among us and will come forth in time of great stress regardless of his clinical burdens, much like Major General Warren of Bunker Hill fame, who was in private life Dr. Joseph Warren, surgeon, address Boston, Massachusetts.

I make a plea for allies from all physicians, whether in private practice or otherwise. For it ill behooves the best minds in our profession to accept scientific dedication to the exclusion of the life struggle. I would remind them that large tyrannies are only built on small tyrannies and that William Faulkner warned that "science is a dangerous mouth to kiss."

Jefferson's truth

Let us get down to the knocking of heads. Dr. Lyman's article, no matter how well written, has merit only as opinion and artful political propoganda. Thomas Jefferson is chosen as the foster-father of education in America. But one of Jefferson's best remembered aphorisms is ignored—"that government which governs least is best," which disqualifies the great democrat from the present controversy as an absentee witness for the present socialization of medicine and education in America.

I am quite sure our academic critics appreciate fully the influence of their written opinion. I am sure no man can be so ingenuous as to believe one can separate the responsibilities of political writing from political action and its consequences. The pen may be mightier than the sword but the really great conflicts of ideas and interests have in the past been settled largely by the sword or worse. Voltaire's thinking and writing helped conceive the French Revolution but his body must have turned many times in its grave at the excesses of the revolution and Napoleon's restoration of "order" by spraying Europe with grape shot and strewing it with corpses.

adaptability is not a virtue

I am not convinced that the prime attribute of a great leader is adaptability rather than stubborness. Semmelweiss, Lister, Pasteur and Halstead did not gain their victories by adaptability. I am sure everyone must agree that in this era of conformity, Charles DeGaulle adapts only when absolutely necessary. Winston Churchill gained his victory against what many deemed an inevitable wave of the future with an ineffable, stubborn, physical and moral courage and eloquence to match the courage. I am not convinced that the United States has gained by our adapability in the United Nations as we have watched a dozen bearded brigands in a Cuban forest grown to a force, under our eyes and forewarned by their very words, strong enough to destroy our major cities. This is the direct result of adapability in leadership and I am afraid we have not seen the last of it.

Our academic critic defines salary as a standard fee for a standard service. There is no standard service, people being what we are and allowed a free society. There is, in a free society, no limit to the mediocrity of service and, more important, no limit to its greatness. This leverage to make all men equal in service, equal in performance and equal in reward is the clear language of the far left but of one who says "See, I am for you, I am really one of you despite our differences."

Of course we must face the attitudes of the present confronting private practice and all private enterprise. More important than the opinions of our academic critics, the majority public opinion in America today classifies the conservative as the bad guy and the leftist liberal as the good guy. As the bad guys we may have some graces and be allowed an occasional pat on the head for small virtues, much as Dr. Lyman bestows occasionally on the physician. But in the morality show of Everyman 1963 and the political struggles of the future we are the bad guys and the public generally wants Mr. Dillon to get us. Whether he will get us or not is probably not so important except that this struggle is almost a miniature of the universal dilemma of Everyman today. The important thing is—DO WE REALLY HAVE A CAUSE?

Do we really have a cause? If we view the terrors of the past twenty five years, largely precipitated by powerful governments who began their conquest of the people by the socialization of the professions, we have a cause indeed. Dr. Lyman admits to some evils and dangers inherent in socialization. Can anyone deny that, with the socialization of any group, sooner or later there is the presentation of the bill? Regardless of the horrible mixed up rights and wrongs in the case, was not the conflagration at Old Miss the past year the result of the presentation of a bill by the federal government unwelcome to many of the people of Mississippi?

Go back to the crucibles of tyranny a short generation ago in Germany. Did not the butchery and whole dreadful tragedy follow directly the subjugation and control of the professions of teaching, medicine, the military and the law, and end finally in the prostitution of all of them in a Christian nation like our own? Do we have a cause—period.

trouble in Sweden

The complaint of the left in America has been that socialism has never had a full trial here because it has not been expanded to include all the professions and because of the life which has been allowed to remain in big business. If socialism could have reached greatness it should certainly have happened in Sweden. Here we have a well favored country, untouched by the blood baths of two world wars and socialism has had her way with pretty much all the professions. Has the resultant obsession with materialism made a great and happy country? Is it an accident that with socialization of medicine there has been a collapse of medical morality? One wonders what would be the fate of Martin Luther's inkwell in Sweden today, tempted by the performances attendant to the socialization of at least two professions.

It seems fairly evident how the struggle will be settled here in America for the present. And we in America may have to endure a travail not unlike that of Germany and Russia and pay the price Sweden has yet to pay. For if the well intended and misguided, the leftists in "I-am-one-of-you-too" clothing, continue to have their way with the young in the schools and colleges, we are already lost and may well be for several generations.

This writer is not ashamed to be one of the "frightened men" in private practice and our backs are certainly to the wall. I believe those of us who live and practice on main street live with America every day and it is my faith that our vision, our knowledge and our way is a finer way with all our faults than the new order envisioned in the socialization of our profession. FOR THE WAY OF OUR CRITICS IS THE SURRENDER OF THE REALLY FRIGHTENED MEN TO SECURITY. And contrary to their great sophistry, security and freedom can never be the free wheeling opposite sides of the same coin. These men have conveniently forgotten Plato and common sense; these two, security and freedom, are opposites which can never live in the same house together at peace. The eventtual price for this kind of security must "at its best be some kind of tyranny and at its worst some kind of slavery." *Do we have a cause?*

One of the greatest fallacies in any socialistic proposition is the avoidance of a fact of life that a certain amount of self interest is a perfectly healthy ingredient of human nature. This principle will operate in a Fabian society in America, in Communist Russia and in our academic life. It operated in the thinking and politics of Thomas Jefferson and possibly it can be forgiven even in the healing arts.

he damages himself

We now must proceed to an unkind paragraph. But where the breach is so wide the chips must fall where they may. From the professional side, Dr. Lyman divorces himself from the ranks of most physicians everywhere when he spears us, at a time when we are assailed from every direction, with his remarks about the occasional rascal in our midst and the disgraceful old saw as applied to the fee system—"your money or your life." In his attack on private practice he damages all physicians, including himself. There are rascals in every profession, even in teaching, and his robes of judgment do not become him so well as his literary talent.

the best defense

My article contains much of the credo of the unabashed traditionalist who will never fit well into the brave new world. This is a world to which our profession's critics are attempting to condition us, and toward which Everyman is being pushed by the Mr. Bigs of our time, the demands of science and the threat of nuclear extinction. The article is written from the point of view that, not only in sports but in all struggles, the best defense is a good offense. This is a principle which organized medicine has not been able to use very well due to the very nature of the physician's relationship with people. But knowing the odds and the cost, I make a plea for conservative doctors in private practice and elsewhere to take up your cudgels and use them where you can and well.

Alfred Tennyson wrote some great lines, largely forgotten in our neurotic era, about the last voyage of the cunning, intrepid wanderer Ulysses. The aging voyager, seeking new horizons to the west, vowed "—that which we are, we are, made weak by time and fate, but strong in will to strive, to seek, to find and not to yield."

The socialization of medicine should not be fought only because of the old traditions and our suspicion of great changes. We in private practice should, like old Ulysses, seek new horizons. But the voyage proposed by our critics must be fought if we believe it is a large step towards the further decay of American character and poor performance. It must be fought with cunning and courage; not by simulation and dissimulation and the successive compromises which are actually one defeat after another. Perhaps we must accept, in these times, regulations against the slaying of dragons and the request for no more giants, please. But fight total captivity we must.

One large concession must be made to our critics, academic and otherwise. If the danger of tyranny is unimportant, if pride, initiative and American spirit and character are unimportant, and if performance is really unimportant—then, Gentlemen, I agree—neither physicians nor the people have anything to lose by the socialization of medicine in America.

summary

The private practice of medicine in America is defended against the criticisms of academic thinking and the political left. The theory that true freedom can be maintained in the socialization of any of the professions, including teaching, is rejected.

A review of some of the historical developments of tyranny built on the socialization of the professions is presented. The dilemma of loss of freedom involved in the "security" of socialized medicine is identified as the dilemma of Everyman today regardless of his status or politics and whether he knows it or not.

Finally, an appeal is made for the continued struggle against the socialization of medicine because it will contribute to deterioration of American character and medical performance. ■

542 Main Avenue South

REFERENCE

1 Lyman, R. A., Jr., Disaster in pedagogy, N. England J. M., 257:504-507 (September 12) 1957.

THE PEOPLE AND THEIR RULERS

It is easy to conceive that in the infancy of governments, when commonwealths differed little from families in number of people, they differed from them too but little in number of laws; and the governors, being as the fathers of them, watching over them for their good, the government was almost all prerogative. A few established laws served the turn, and the discretion and care of the ruler supplied the rest. But when mistake or flattery prevailed with weak princes to make use of this power for private ends of their own and not for the public good, the people were fain by express laws to get prerogative determined in those points wherein they found disadvantage from it; and thus declared limitations of prerogative were by the people found necessary in cases which they and their ancestors had left in the utmost latitude to the wisdom of those princes who made no other but a right use of it, that is, for the good of their people.

John Locke, The Second Treatise of Government

Resection of Carcinoma of the Duodenum Following Irradiation

Report of a Case

GEORGE M. BURNS, M.D. / AMBROSE B. SHIELDS, M.D., Portland, Oregon

Primary carcinoma of the duodenum is not a common lesion. In the extensive study reported by Eger, the incidence is 0.033 per cent in 350,286 routine autopsies.[1] The lesion constituted only 0.3 per cent of all carcinomas of the gastrointestinal tract in his series. However, 45.6 per cent of the carcinomas of the small bowel were located in the duodenum.

In the literature, carcinoma of the duodenum is often divided into three groups, namely, suprapapillary, peripapillary, and infrapapillary. Kleinerman and his associates, in their collection of these tumors, classified 22.5 per cent as suprapapillary; 59.2 per cent as peripapillary, and 18.3 per cent as infrapapillary.[2] In Eger's series the incidence of infrapapillary carcinoma was only 12.0 per cent.

Jordan and DeBakey advocate irradiation postoperatively when there is doubt concerning the adequacy of resection for carcinoma of the duodenum.[3] But we found no mention in the literature regarding the use of irradiation in an attempt to make resection of an inoperable lesion possible. In the case now reported, an infrapapillary carcinoma of the duodenum had become frozen to the superior mesenteric vessels. Following a course of irradiation the lesion was easily resected.

CASE REPORT

A retired farmer, aged 70, was seen by us on July 16, 1962, because of recurrent episodes of cramping pain throughout the upper abdomen, nausea, and vomiting. After vomiting he felt better. The symptoms, which had started in February 1962, were mild at first. But in the three weeks prior to the time we saw the patient they had become more severe and occurred at more frequent intervals. During the previous year he had lost 13 pounds.

In March 1962 roentgenograms of the gastrointestinal tract had disclosed an obstruction in the first portion of the duodenum that was attributed to an ulcer. An ulcer regimen was prescribed, but it did not relieve the symptoms.

Physical examination on admission disclosed a suggestion of a mass slightly above and to the right of the umbilicus. Otherwise there were no positive findings.

Hemoglobin measured 12.8 grams per 100 ml. of blood. The total bilirubin was 0.45 mg. per 100 ml. Results of all other laboratory studies were negative.

On July 16, roentgenologic examination of the upper gastrointestinal tract revealed a persistent narrowing of the first 4 cm. of the third portion of the duodenum (Fig. 1). At this point the mucosal pattern of the duodenum was distorted. Roentgenologic examination of the colon and the chest disclosed no abnormalities. A diagnosis of duodenal obstruction was made, and exploratory laparotomy was advised.

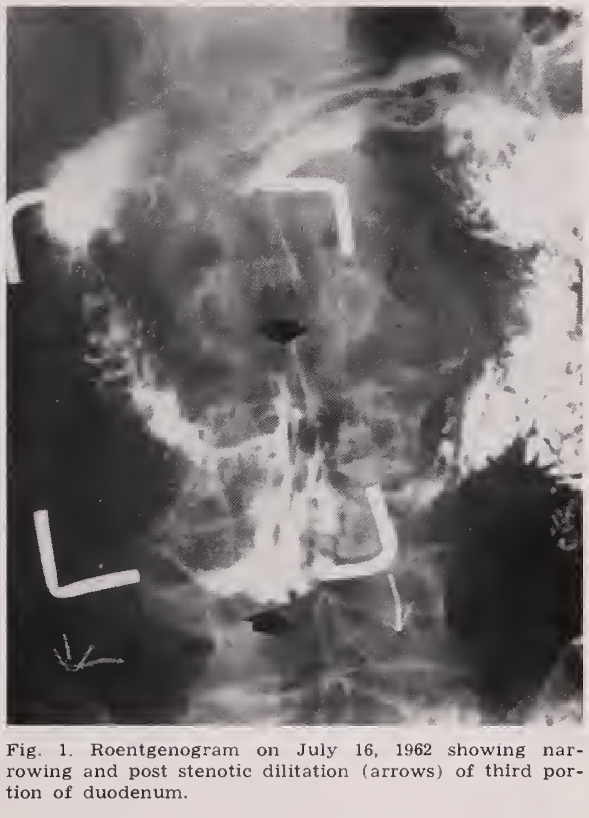


Fig. 1. Roentgenogram on July 16, 1962 showing narrowing and post stenotic dilitation (arrows) of third portion of duodenum.

On July 24, 1962 the abdomen was opened through a midline incision extending from the xiphoid process to the umbilicus. In the third portion of the duodenum there was a mass which measured 10 cm in diameter. The major portion of the mass appeared to be within the lumen of the bowel. It also involved the exterior portion of the bowel and was intimately attached to the superior mesenteric

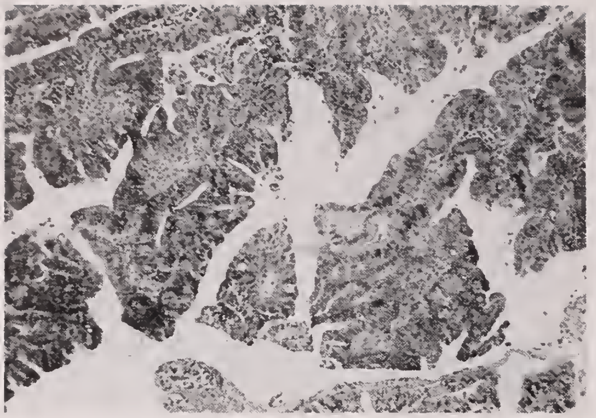


Fig. 2. Photomicrograph of biopsy specimen obtained on July 24, 1962. Note papillary pattern of lesion (X 70).

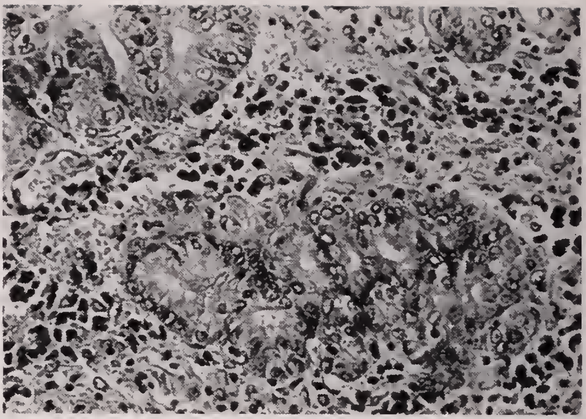


Fig. 3. High power view of tissue shown in figure 3, demonstrating the gland-within-gland formation seen in the deeper portions of the tumor (X 170).

vessels. The liver, gallbladder, and pancreas appeared to be normal. No enlarged lymph nodes were palpated. Duodenotomy revealed the tumor to be polypoid and friable. Tissue removed from the tumor for frozen section disclosed papillary adenocarcinoma. Posterior gastrojejunostomy was done, after which the abdomen was closed.

Paraffin sections showed a moderately differentiated adenomatous neoplasm having a distinct papillary pattern (Fig. 2), and consisting of acini of varying size closely approximated in a delicate, barely perceptible stroma. The lining cells were tall columnar and formed numerous papillary infoldings. No evidence of mucus secretion was apparent. There were many instances of gland-within-gland formation (Fig. 3). Although little of the duodenal wall was included, the neoplasm appeared to be definitely infiltrative and had a frankly malignant pattern. Pathologic diagnosis was papillary adenocarcinoma of the duodenum.

The patient made an uneventful recovery. Ten days after his operation, August 3, he was discharged from the hospital.

From August 16, to October 3, the patient was treated with radiotherapy in an attempt to reduce the size of the tumor so that resection might be attempted. Cobalt 60 teletherapy was given to anterior and posterior fields of 10x10 cm each from 80 cm distance. The estimated tumor dose was 4360r. Thirty-two treatments were given in forty-nine days. Higher dosage was not used because of possible damage to the spinal cord. The patient tolerated the radiotherapy well. Subsequently he gained 5 pounds and remained asymptomatic.

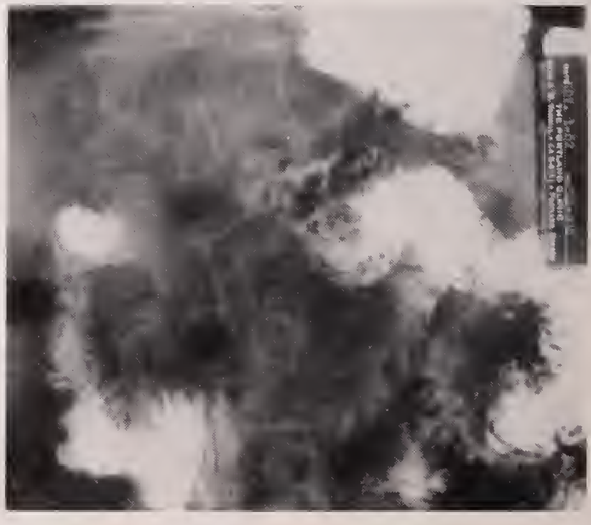
He was seen again on November 1, when physical examination was essentially normal. Roentgenologic examination of the upper gastrointestinal tract (Fig. 4) showed the defect in the third portion of the duodenum to be much smaller than it had been during the examination on July 16.

On November 12, 40 days following termination of radiotherapy, the patient was operated on again. An incision was made through the midline scar and extended down along the right rectus muscle. On opening the peritoneal cavity it was seen that the tumor had decreased from its former diameter of 10 cm to a diameter of approximately 4 cm. The tumor seemed to be limited only to the third portion of the duodenum. The superior mesenteric vessels were now free. There were no enlarged lymph nodes. The liver was grossly normal. The tumor was resected by transecting the duodenum proximally just below the ampulla of Vater and distally at the ligament of Treitz. An end-to-end anastomosis was then done, following which the abdomen was closed.

The excised portion of the duodenum was 5 cm long. When it was opened, an ulcerated area, 1 by 3 cm in diameter, was disclosed (Fig. 5). Proximal and distal to the ulcerated area there was approximately 0.5 cm of normal bowel tissue.

Microscopic examination showed a pattern surprisingly different from that observed in the tissue taken for biopsy. Centrally there was extensive superficial ulceration (Fig. 6). Only occasional papillary acinar structures remained about the periphery. The remainder of the neoplasm was composed almost entirely of large pools of stringy mucinous material and relatively few tumor cells. Most of the tumor cells occurred in small clumps suspended at random in the mucinous substance. Occasionally they lined

Fig. 4. Roentgenogram on November 1, 1962 demonstrating increased size of lumen of duodenum as compared with previous roentgenogram.



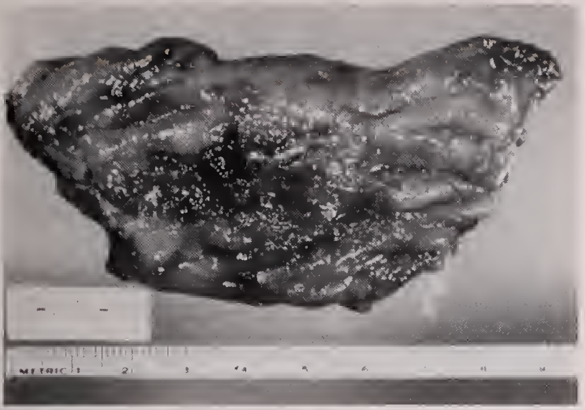


Fig. 5. Specimen resected November 12, 1962 showing ulcerating lesion of duodenum.

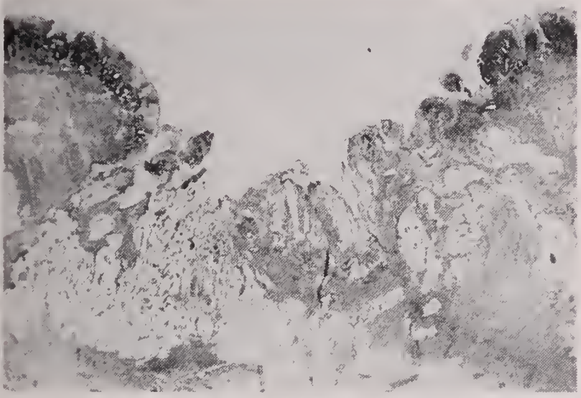


Fig. 6. Photomicrograph of resected neoplasm revealing extension of mucinous carcinoma into duodenal wall (X 8.5).

part of the walls of the pools. In general, the cells were similar to those seen in the biopsy specimen, although signet ring forms were identified with regularity. The tumor completely penetrated the muscularis and extended into the subserosa. Vascular invasion was not seen. Final pathologic diagnosis was infiltrating adenocarcinoma of the duodenum, mucoid type.

The patient made an uncomplicated recovery. There was no delay in wound healing. On the ninth postoperative day, November 21, 1962, he was discharged from the hospital. When he was last seen, on April 2, 1963, he said he had had no further symptoms and was feeling fine. Roentgenologic examination of the upper gastrointestinal tract at this time showed no obstruction of the duodenum or evidence of recurrence of the carcinoma.

discussion

There is general agreement that tumors of the duodenum are best treated by surgical excision. Yet, this treatment is frequently not possible. In the 70 cases of infrapapillary carcinoma of the duodenum collected by Shallow and his associates, resection of the tumor had been done in only 15.[4] The majority of the tumors in their series had been considered to be inoperable at the time of laparotomy or were detected at autopsy. Several authors attributed the inoperability of carcinoma of the duodenum, in part, to its early invasion of the superior mesenteric vessels.

The present report is not intended to demonstrate that radiotherapy is the answer to carcinoma of the duodenum, rather it suggets that radiotherapy may make resection of the tumor possible when there is local invasion. ■

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Radial vs. Circular Removal of Hemorrhoids

LEWIS E. LITVIN, M.D. Seattle, Washington

Many surgical procedures have been developed for removing severe types of hemorrhoids. The operation may vary from simple radial excision to complete circular resection of a segment of the anorectal skin and mucous membrane. Each method may have its complications, either from inadequacy of removal or from production of an undesirable result. In recent years there has been a trend toward modification of the radical, circular-resection procedure in an attempt to improve treatment of moderate and advanced types of hemorrhoidal disease. In contrast, this paper will indicate how the *radial* excision method may be modified, expanded, and applied to these situations, perhaps with greater ease and fewer complications than with the circular method.

Basically, an adequate hemorrhoidectomy has two objectives to fulfill. There should be, first, elimination of the disease with the least amount of disturbance anatomically and, second, production of the least possible number of complications postoperatively.

Elimination of diseased and dilated veins and prevention of recurrence of hemorrhoidal disease can be accomplished by either the circular or radial method. It makes no difference, as far as removal of diseased tissue is concerned, whether the approach is vertical or horizontal or a combination of the two, just so the diseased veins and potentially diseased veins are removed. Once a vein is removed it cannot cause further trouble. However, it is of considerable importance to use a technique of surgery which is the least disturbing to the normal anatomical relationships of the anorectal region and which causes the least discomfort and the least possibility of other postoperative complications. The most common complications which are prevented or reduced to a minimum by the expanded radial method are: hemorrhage, stenosis, pain, lack of anal control, urinary retention, external tags, recurrence, fissures, loss or delay of return of anorectal sensation, separation of anastomotic lines and infection in a closed space.

Elimination of Disease with the Least Anatomic Disturbance

preoperative preparation of patient

In addition to the general physical evaluation of the patient, particular attention is always given to the sigmoidoscopic study, and often to a colon x-ray study, if it is indicated. During the sigmoidoscopy, the extent of hemorrhoidal disease can be evaluated more completely than by simple anoscopy since the entire circumferential picture may be seen at one time. If other disease is found at a higher level, plans for its treatment can be made prior to the surgery.

The patient is always admitted to the hospital the day before surgery, and the colon is prepared and cleansed by giving saline enemas until clear, the night before surgery. The enema is repeated in the early morning before surgery. The remaining orders are essentially routine, and include a soporific at bedtime, withholding food and drink after midnight, surgical preparation of the anal area and emptying of the urinary bladder prior to surgery. The preanesthetic orders are given by the anesthesiologist.

anesthesia

The anesthetic is usually one that gives good relaxation to the anal musculature and may be either of a spinal or a caudal type. The patient is placed in prone position with flexion at the hips, and the buttocks are held apart with wide adhesive tape. Cleansing is done with Phisohex and the anal area is squared off with towels prior to the larger drapes.

surgical evaluation

Adequate evaluation and exposure is accomplished with two instruments which are considered essential to this technique. One is a large caliber anoscope with obturator and the other is a lateral anal retractor. Usually, the anus is well relaxed and the primary hemorrhoids tend to be dilated and readily apparent. At other times they can be demonstrated by inserting a dry

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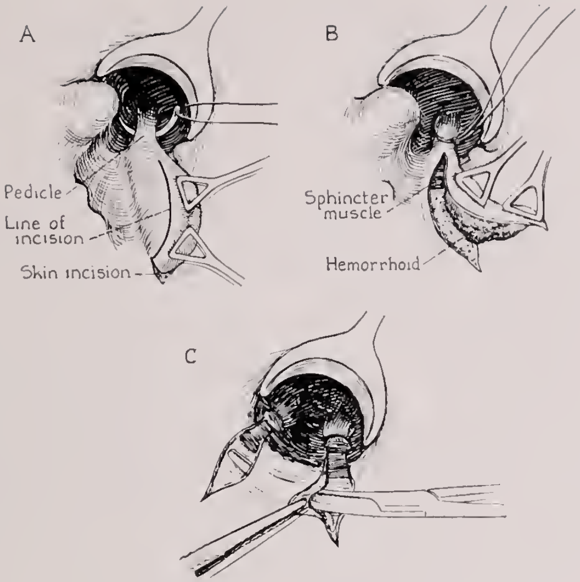

gauze sponge through the anoscope, and withdrawing it, thereby producing a prolapse of the hemorrhoids.

Generally, the major hemorrhoids are three in number and anatomically occupy the right posterior, right anterior and left lateral positions. At times these positions seem to vary and there may be four or five primary hemorrhoids requiring removal. Each hemorrhoidal mass is removed radially using the same general method in each case.

technique of segmental resection of hemorrhoid

Exposure is accomplished by placing the lateral retractor in the anus opposite the hemorrhoid to be removed. The hemorrhoid is grasped radially along its crest with several Pennington forceps and is elevated. A 00 chromic catgut suture on a small round needle is placed moderately high at the proximal or mucosal end of the hemorrhoid. Traction on the first suture allows further elevation for the placement of the second and deeper bite with the same needle and suture. The suture is tied and the ends are left equally long. They are clamped in a hemostat for use later. By placing this suture first, much of the later bleeding is eliminated.

Next, the hemorrhoid is elevated by traction on the Pennington forceps, and scissors are used to make a small incision through the anal skin at the distal or skin end of the hemorrhoid. Using the scalpel, two shallow parallel incisions are made along the crest of the hemorrhoid extending just through the skin and mucous membrane. These incisions start at the skin incision and extend nearly to the proximal suture. Purposely, the incisions are made close to the Pennington forceps so that a maximum of normal skin and mucous membrane may be preserved. Using the scalpel, the skin and mucous membrane on both sides of the hemorrhoid are pushed laterally and the underlying hemorrhoid is exposed. By blunt and sharp dissection the hemorrhoid, with its small strip of skin and mucous membrane, is dissected off the underlying internal sphincter muscle until the proximal suture is nearly reached. The remaining pedicle is tied again with the original suture and the hemorrhoid is excised. Individual small bleeding points, if present, can be ligated with 000 chromic catgut.

The same procedure is done to each major hemorrhoid group, always preserving as much skin and mucous membrane as possible. If the situation at some point precludes the removal of any amount of skin and mucous membrane, the hemorrhoid could be removed through a single incision along its crest without removing any normal tissue.

After the primary hemorrhoids are removed, it is important that particular attention be given to the longitudinal areas of skin and mucous membrane lying between the excisional sites. In these zones lie the smaller satellites of dilated veins and isolated vascular tumors which so often create the appearance of an entire ring of hemorrhoids. These are approached by gently dissecting under the longitudinal remaining areas from both sides and carefully excising or avulsing these vascular tissues. Usually the dissection plane is found over the internal sphincter muscle. Exposure for this procedure is maintained with the lateral anal retractor. No suturing is done since the tissues fall naturally into their normal positions and relationships.

At completion of the hemorrhoidectomy the large anal speculum is used to inspect for any bleeding points. A small vaseline wick is placed in the anal canal to serve as a drain in case of postoperative hemorrhage. Dressings are applied and held in place with adhesive tape.

postoperative care

Postoperatively, the adult patient receives morphine sulphate gr. 1/6 as needed for pain, and diet as desired. Catheterization of the urinary bladder may be done, if necessary, in 12 hours. On the first postoperative day the anal wick is removed and the anus is treated with witch hazel packs and an analgesic ointment. Mineral oil is started orally and the patient can stand or sit at the bedside for voiding. On the second postoperative day sitz baths are started and the morphine sulphate order can be changed to codeine. Usually, the patient can be discharged on the third postoperative day following either a normal bowel movement or a saline enema given through a small catheter. Rectal digital examinations may be done at weekly intervals although this is probably more informative than therapeutic.

Reducing Postoperative Complications

The attempt to prevent postoperative complications by using this expanded radial method of hemorrhoidectomy seems to be well indicated by theory and substantiated by practical observation. Nature is quite kind to the anal surgeon in providing adequate blood supply and excellent healing tendencies in this region. These factors permit extensive undermining *without necrosis or sloughing*. In this manner all of the primary hemorrhoids and adjacent satellite venous tumors can be removed to prevent "recurrences."

normal relationships and functions

Leaving large, wide, normal areas of skin and mucous membrane between the areas of excision seems to serve many useful purposes. Basically, it keeps all levels of skin and mucous membranes in their normal anatomic relationship and in proper relationship to the sphincter muscles. This may have great bearing on the normal neurogenic control of defecation and anal continence. Also, it leaves ample circumferential tissue for quick healing and provides for adequate slack in the mucous membrane and skin if needed during the passage of large stools. By avoiding a circular incision there is apparently no opportunity for a late circular stenotic scar to form. Also, by avoiding a circular excision and anastomosis there is no possibility of a wound separation in the postoperative period. No closed space is created and drainage is most adequate to prevent infection with subsequent scarring. Having adequate circumferential slack also helps to prevent splitting and fissure formation.

Hemorrhage is guarded against by triply ligating the major pedicles first, and ligation of individual bleeding points later. Final inspection through the large anoscope is a further visual check.

less pain

One of the most outstanding and rewarding features of this method of hemorrhoidectomy is the relative lack of moderate or severe pain during the postoperative period. Most patients are truly surprised that the discomfort is so very much less than anticipated. Usually, analgesics are needed only during the first and second postoperative days. This greater degree of comfort may be attributed to: 1) absence of tension in the tissues along anastomotic lines, 2) no suturing of mucous membranes to the sphincter muscle with distortion, 3) no closed spaces with infection and pressure, and 4) the covering of the surgically exposed areas by the falling together of relaxed tissues normal to those areas.

Urinary retention after any anal surgery is probably a reflex action caused by discomfort. Therefore, any procedure which causes less pain is beneficial in preventing this usual complication.

skin protects

External tags of edematous skin will be observed in most cases but should not be removed too soon, if at all. Actually, they provide the slack necessary to permit passage of a large or constipated stool without discomfort, tearing, or fissure formation. Circular excision cannot leave the sphincter muscle with this much freedom to relax but, due to a ring of scar tissue, is apt to restrict its physiologic potential. This is one of the more important advantages of the radial method.

After several months, most of the redundancy will disappear and there will be little need for revision. Even when these so-called tags are quite prominent for a time, they seem to cause no difficulty with anal hygiene. Removal, if it ever does become necessary, is a simple office procedure.

summary

Adequate hemorrhoidectomy should remove all diseased tissue with the least possible alteration of normal anatomy and leave the fewest possible postoperative complications. The radial operation meets these requirements better than does the circular method. First step in the operation is to pick up skin and mucous membrane over the hemorrhoid with Pennington forceps. After a suture-ligature has been placed at the apex, and tied, a narrow strip of skin and membrane is removed, exposing the hemorrhoid. It is dissected out and removed. After all major hemorrhoids have been removed, the secondary or satellite veins and small venous tumors are removed from the areas between wounds.

The intervening strips are undermined and dissection is carried deeply enough to expose the internal sphincter. Bleeding points are ligated but edges are not sutured. There is remarkably little postoperative pain, use of analgesics is minimal, digital dilation is not necessary and most patients leave the hospital on the third day. ■

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CONSENT

Personally, and speaking as a patient, I have no doubt whatever that there are circumstances in which the patient's consent to taking part in a controlled trial should be sought. I have equally no doubt that there are circumstances in which it need not— and even should not—be sought. My quarrel is again with a code that takes no heed—and in dealing with generalities can take no heed—of the enormously varying circumstances of clinical medicine. Surely it is often quite impossible to tell ill-educated and sick persons the pros and cons of a new and unknown treatment versus the orthodox and known? And, in fact, of course one does not know the pros and cons. The situation implicit in the controlled trial is that one has two (or more) possible treatments and that one is wholly, or to a very large extent, ignorant of their relative values (and dangers). Can you describe that situation to a patient so that he does not lose confidence in you—the essence of the doctor-patient relationship—and in such a way that he fully understands and can therefore give an understanding consent to inclusion in a trial?

Sir Austin Brodford Hill, quoted in on editorial, Medicol Tribune, Moy 27, 1963

Mitral Valve Disease

A Consideration of Four Controversial Aspects

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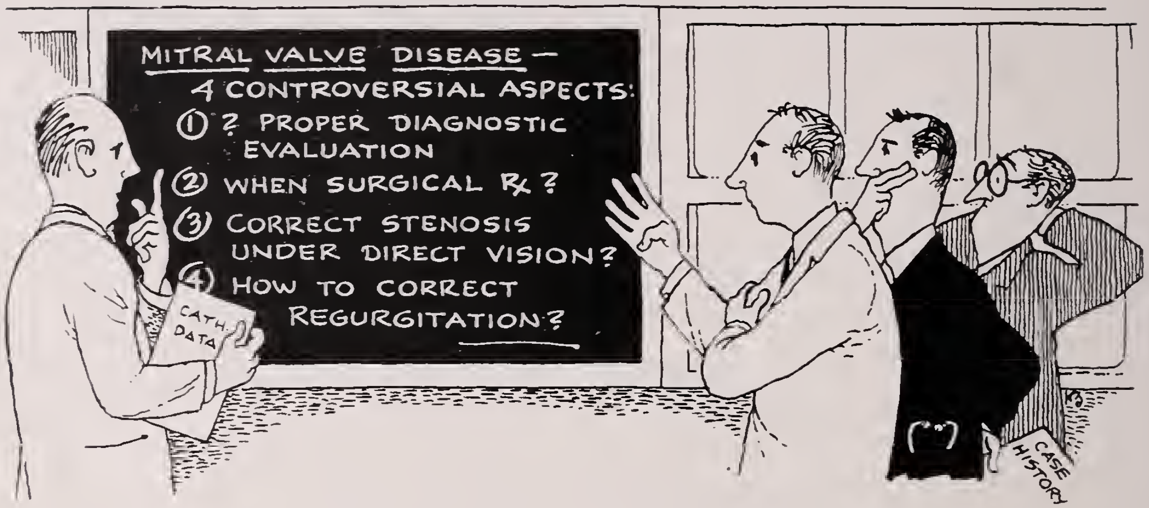
STEPHEN J. WOOD, M.D. / ALEXANDER H. BILL, JR., M.D., Seattle, Washington


MITRAL VALVE DISEASE —
4 CONTROVERSIAL ASPECTS:
① ? PROPER DIAGNOSTIC EVALUATION
② WHEN SURGICAL ℞ ?
③ CORRECT STENOSIS UNDER DIRECT VISION?
④ HOW TO CORRECT REGURGITATION?
CATH. DATA
CASE HISTORY

In the nearly 40 years since the first clinical operations for mitral valve disease were performed[1,2] great strides have been made in the diagnosis and surgical management of abnormalities of this valve. Nonetheless, considerable controversy exists about several important points. This paper is directed toward a consideration of four of these which, posed as questions, are:

1. What is adequate diagnostic evaluation?
2. When should surgical intervention be advised?
3. Should pure mitral stenosis be corrected under direct vision?
4. How should mitral regurgitation be corrected?

what is adequate diagnostic evaluation?

During the past 34 months (Table 1) 79 patients with mitral valve disease have been studied in The Heart Center of Providence Hospital. Heart catheterization studies were carried out in addition to the usual clinical evaluation in 77 of these 79 patients (97 per cent).

Table 1
Mitral Abnormalities in 79 Patients Studied

Stenosis	
Pure, slight	3
Pure, prominent	38
With regurgitation	14
Total	55
Regurgitation	
Pure, slight	5
Pure, prominent	13
With slight stenosis	6
Total	24
Series total	79

The necessary starting point is a careful clinical history of the patient's disability as indicated by symptoms in relation to activity demands. Clinical evaluation by careful examination, chest x-ray and electrocardiographic studies may lead to an adequate appreciation of the physiologic and anatomic alterations present. Response to exercise tests may often be helpful. Current technics of left heart catheterization and angiocardiography permit quantitative assessment of the circulatory abnormalities present and often allow a more critical estimate of medical or surgical risk than clinical evaluation alone. Discrepancies may exist between clinical evidences of disability and hemodynamic alterations, and the degree of circulatory abnormality may not be appreciated without appropriate catheterization studies.[3,4]

Accordingly we believe that the majority of symptomatic patients suspected of mitral valve disease (in whom surgical therapy is being considered) should have the benefit of a complete right and left heart catheterization. The data obtained more than justify the risk (slight), the inconvenience (moderate) and the expense of the procedure (moderate).

when should surgical intervention be advised?

A decision regarding surgical therapy rests ultimately upon a comparison of the risk of the mitral valve disease under medical management alone as opposed to the risk of operation and chances for subsequent improvement from surgery. Estimation of risk on medical management alone requires first an accurate assessment of the patient's altered cardiac physiology; in particular, alterations of myocardial function and pulmonary circulation which frequently accompany mitral valve disease.

Secondly, knowledge of the natural history of morbidity and mortality in such patients is needed. Estimation of the risk and benefit anticipated from surgical therapy requires assessment not only of the physiologic abnormalities of the disease, but also of the anatomic alterations of valve structure, specifically in relation to the available technics of surgery. Assessment of any accompanying coronary artery or pulmonary disease is necessary in the estimate of operative risk.

Although readily stated in the above generalities, decisions in individual patients are often difficult. Statistics of groups must be applied to individual patients with some reservation. Wishes of the patient, number of dependents and other details of the patient's life situation often enter into the decision. Finally, the time factor in immediate risk of surgery versus the future risk of medical treatment creates difficulties in comparison of these risks.

As a general guide, if the patient is gainfully employed and not severely disabled, and the outlook is one of only slow progression, operative intervention is indicated only if it can be done at a very low risk with high certainty of an excellent result. On the contrary, when disability is prominent or rapidly progressive, then an appreciable surgical risk is justified.

pure mitral stenosis

Sufficient information is available to indicate the poor long term prognosis of persons disabled by pure mitral stenosis. Olesen's current long term follow-up indicates 10 and 20 year mortality rates of 18 per cent and 30 per cent respectively in class II patients and 67 per cent and 100 per cent respectively in class III patients.[5] Other similar reports are reviewed by Boyle.[6] Risk of surgery in such patients has reached a low figure in most centers. The outlook for seriously disabled patients (class IV) is generally one of death within one year. Although surgical risk is greater in these patients than in class II or III, it is considerably more favorable than the medical risk.

Therefore if disability is definite and there is objective evidence of hemodynamic obstruction, surgical intervention should be considered, provided there is no contra-indication (other cardiac conditions which are irremediable, serious lung disease or advanced hepatic or renal dysfunction). In most cases a properly done procedure will remove, or at least significantly reduce, the mitral obstruction without production of regurgitation.

pure mitral regurgitation

Mitral regurgitation requires an increase in total left ventricular stroke volume for an adequate forward flow. Hence a volume, and not pressure, load is imposed on the left ventricle. In contrast to mitral stenosis, marked hemodynamic abnormalities may be accompanied by minimal disability provided that left ventricular function is not impaired. Studies may show that 75 per cent of total left ventricular stroke volume is regurgitant flow and yet disability may be minimal and consist of only mild ease of fatigue and dyspnea. It is generally only when myocardial failure ensues that progressive or serious disability occurs. Hence, when disability is sufficient to justify the risk of current surgical treatment, one can assume that a degree of myocardial failure is present. It follows that effort should be made to rule out other factors, such as primary myocardial or coronary disease in patients with prominent disability. Yet one must not wait until the patient is moribund, for there is then little reserve left and the operative risk is very high. Furthermore, if effective muscular contractility has been lost due to myocardial fibrosis, improvement provided by altered valvular anatomy may not result in over-all improvement in heart function.

While we would like to intercept patients prior to development of significant symptoms (a degree of failure), we do not feel that this is yet indicated. Our reason for this viewpoint is that while major advances have been made in the surgery of mitral regurgitation, the procedures currently available have not been validated by the passage of sufficient time.

combined mitral stenosis and insufficiency

This combination often presents a difficult problem since the valve is frequently severely deformed. Demonstration of this mixed lesion, lack of an opening snap, absence of valve mobility on angiocardiography and evidence of valvular calcification combine to suggest rigid, distorted, calcific valve substance which will not yield readily to simple technics. Radical surgery, including total valve replacement, is often necessary and the risks are invariably higher. The presence of serious disease of the aortic valve, significant coronary artery obstruction or marked pulmonary hypertension due to pulmonary vascular disease constitute relative contraindications to surgery. However, if the basic problem appears to be primarily at the mitral valve, disability is prominent or rapidly progressing, and facilities and skills for total valve replacement are available, surgical intervention may be considered.

should pure mitral stenosis be corrected under direct vision?

We believe open operation should be employed in the majority of cases. Our reasons are that, a. direct vision permits a better operation and, b. risk of open operation appears to be comparable to that of the closed procedure.

Is it not reasonable that a better operation can be done if one sees what he is doing, as opposed to a purely blind procedure? The experiences of Nichols, Kay, Zuhdi, and Morse strongly indicate that a better operation can be given the majority of patients if it is carefully controlled under direct vision than if done by blind digital or instrumental tearing of the valve.[7-11] Our experience with open repair of pure mitral stenosis has been limited to 8 cases. However, the results in these 8 patients have been strikingly good. The problems presented by the disease in these valves would have made adequate correction by closed technic exceedingly difficult.

The open operation has advantage over the closed in that one is able accurately to incise the lines of fusion, to remove limiting calcifications, to divide fused cords and to split papillary muscles to give additional mobility, to remove clots within the atrium, to correct any insufficiency produced or present, or even to remove an atrial tumor which may have masqueraded as mitral stenosis. If the operation can be done at no increase in risk, the desirability of the open procedure will be self evident.

The disadvantages of the open technic are that it is a more complex operation requiring use of the pump oxygenerator. Also, more blood is required than for a closed procedure.

If mitral stenosis is to be treated by closed means the pump oxygenator should be available on standby basis. Decision to alter the attack may have to be made if the disease found absolutely requires open technic for satisfactory correction. Anything less than this is not in keeping with the progress of cardiac surgery.

The long term results of closed operations for mitral stenosis are now becoming available. Some are good, some are fair and some are poor. One of the best follow-ups in the literature has recently been given by Logan and colleagues indicating restenosis in 30 per cent of 264 patients followed from 5 to 11 years.[12] However, of these patients followed for 9 years or more (26) the incidence of restenosis rose to 60 per cent. Logan states the problem well, "Clearly restenosis has become a major problem, and all patients treated by mitral valvotomy should be closely followed thereafter at intervals not longer than twelve months."

The risk of open operation for restenosis following an inadequate closed procedure is measurably increased. Dissection is more difficult, hemorrhage is greater, landmarks are obliterated, and the deformity of the valve is often more difficult to correct because of previous blind manipulation.

The long term results of open operations are not yet known. We believe, however, that the restenosis rate with properly done open procedures will be very low. The answer will only come from careful pre- and postoperative assessment.

It is our opinion that the advantages of the open operation are worth the extra effort and moderately increased expense. We believe that the results are better than with the closed procedure, and that the operative risk is not increased.

how should acquired mitral regurgitation be corrected?

Mitral regurgitation results when there is insufficient valve substance to cover the orifice appropriately. This usually results from loss of leaflet substance, dilatation of the annulus and limitation of valve mobility. Since there is variability in the pathologic anatomy of mitral regurgitation there is no one type of correction best suited for all patients. This implies a need for versatility on the part of the cardiac surgeons faced with this problem.

Surgical approaches attempt to reduce mitral regurgitation by either alteration of existing abnormality or replacement of valve tissue in part or completely. Choice of technic in a given patient depends upon the altered anatomy of the mitral valve and the experience and skills of the surgeon.

There is little controversy over the correction of a ruptured cord or of a cleft or fenestrated leaflet. There is, however, lack of agreement as to the preferred method of correcting other types of insufficiency. Four basic procedures have been developed for the correction of these.

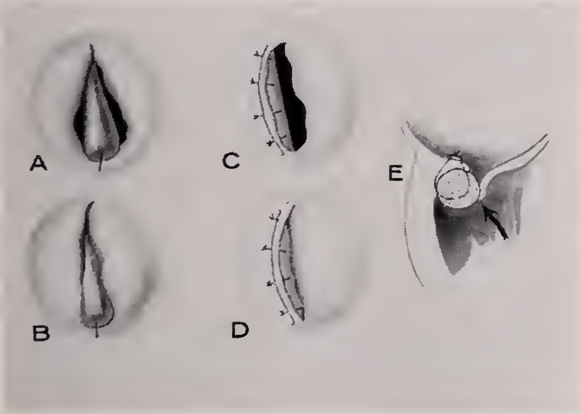


Fig. 1. Methods of correcting mitral regurgitation. A: in Harken's procedure a plastic spindle is anchored obliquely through the insufficient valve orifice so that closure during ventricular systole is effected as in B. In Lillehei's operation, C, a cylindrical bolster of compressed polyvinyl sponge is sewed to the contracted mural leaflet so that closure is effected as in D and E.

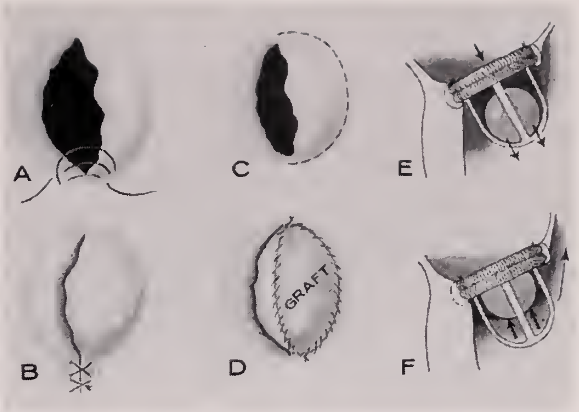


Fig. 2. A,B: mitral valve incompetent due to annular dilatation. Regurgitation corrected by annulus-reducing stitch at commissure (J. H. Kay). C,D: advancement of shortened but pliable major mitral leaflet using pericardial autograft. Leaflet is detached along annulus (dotted line) and graft of sufficient size to permit closure is sewn in (Sauvage). E,F: total replacement of mitral valve with Starr's ball valve prosthesis when valve is hopeless from standpoint of applying lesser procedures.

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From The Department of Experimental Medicine and the Heart Center, Providence Hospital, Seattle.

1. *The baffle operation* (Fig. 1). This was first done by Harken.[13] A plastic object was placed beneath the mural leaflet in an effort to extend it out so that the aortic leaflet could abut against it. Initially this was done by closed technic. The results were unpredictable and often unsuccessful. The same thinking was subsequently put into clinical application by Lillehei using an open technic in which a roll-like spindle of compressed polyvinyl sponge was placed under the mural leaflet, creating, in effect, an obstruction against which the aortic leaflet could move.[14] Varying degrees of stenosis are produced by this procedure. The operation has, however, enabled the successful correction of some cases of mitral regurgitation.

2. *Mitral annuloplasty* (Fig. 2, A and B). Merendino has credited the original successful clinical plication of the posteromedial portion of the mitral annulus to Lillehei who first performed this procedure in August, 1956.[15-17] Plication decreases the size of the mitral orifice and thus increases the relative size of the mitral leaflets, enabling them to coapt. Merendino and colleagues have found this procedure of value.[18-19] E. B. Kay and J. H. Kay have used it extensively with good results.[20,21,9] The opinions of those who have used the procedure vary as to permanency of the result. Annuloplasty is useful when the annulus is definitely increased in size. It is seldom indicated when the annulus is of normal size, for with it, the regurgitation under that circumstance can be corrected only by the production of varying degrees of mitral stenosis.

3. *Leaflet advancement* (Fig. 2, C and D). This procedure, introduced by Sauvage is based on the principle that regurgitation occurs because of a deficiency of leaflet substance which prevents the valve from closing during ventricular systole.[22,23] There may be shortening of both cords and leaflet substance. If the coapting or presenting edge of one leaflet can be advanced to meet that of the other and an appropriate graft placed behind the advanced coapting edge, val-

vular competency will result. The coapting edge to be advanced must have some flexibility or a minimum degree of mobility. If it is a rigid, unyielding front, it cannot accurately coapt with the surface presented by the opposing leaflet. We have used pericardial autografts for adding tissue to valves deficient in substance and found this tissue satisfactory for this purpose.[24,25] Others have also successfully used autogenous pericardium to repair the mitral valve in patients.[26-28] Johnson, et al. have used knitted Teflon successfully to enlarge the aortic leaflet of the mitral valve in dogs.[29]

In this procedure it is basic that the leaflet be incised at the annulus from commissure to commissure so that it can be freed in its entirety from the annulus and is held by its chordal attachments only. The defect thus created is bridged by an appropriate graft of autogenous pericardium. The forward edge of this leaflet may then be advanced to that of the opposite leaflet.

Our clinical experience with this procedure has been limited to 5 patients, 3 of whom are living and improved. The surviving patients are now 26, 24 and 7 months postoperative. These patients are greatly improved. They have not been maintained on long term anticoagulants and there has been no evidence of emboli.

We currently believe that this procedure has merit for the regurgitant mitral valve whose annulus is essentially normal in size, when the leaflet to be advanced either has some degree of residual pliability, or can be made pliable by debridement of calcified material or other plastic procedures.

4. *Total prosthetic replacement of the mitral valve* (Fig. 2, E and F). Total replacement is indicated only if lesser procedures are not applicable. The calcific valve which is both regurgitant and stenotic is a prime example of indication for the use of such a prosthesis.

The work of Starr in this field is outstanding.[30] The problem with hinged prosthetic replacements for the mitral valve has been clotting which has seemed inevitable in all experimental animals. Starr reasoned that if the moving part of the valve were unattached, clotting would be less likely. Accordingly, a caged ball valve was evolved. This valve has been implanted in approximately 30 patients at the University of Oregon with, by and large, good results; and the valve has been used by many others throughout the world.[31] This seems to be the best prosthetic valve currently available. There are reservations about the long term fate of such a prosthesis in the heart, for the majority of animals with such implants have ultimately succumbed from peripheral embolization. Patients with such prostheses should be on anticoagulants indefinitely.

To summarize the handling of regurgitation, we believe the baffle typc operation is seldom indicated. If regurgitation is the result of dilatation of the annulus, annuloplasty is indicated. However, if the annulus is normal in size, or only slightly enlarged, and there is a deficiency of leaflet substance, the leaflet advancement procedure is sound provided that the coapting edge to be advanced has some pliability or can be given pliability by appropriate plastic procedure. If the valve cannot be handled by leaflet advancement, a baffle procedure, or other improvisation, total replacement using the Starr valve would appear to be the only other procedure currently feasible.

summary

Progress in the diagnosis and treatment of mitral valve disease has been truly remarkable. However, controversy exists regarding some aspects of treatment. Four such aspects have been discussed:

1. What is adequate diagnostic evaluation?
2. When should surgical intervention be advised?
3. Should pure mitral stenosis be corrected under direct vision?
4. How should mitral regurgitation be corrected?

A decision regarding surgery rests upon comparison of risk of surgery as opposed to medical treatment only. Difficulties in such a comparison are indicated. Comparisons of risks of medical and surgical treatment justify surgery in the treatment of pure mitral stenosis. The advantages of an open approach seem to favor this technic in mitral stenosis. The various procedures currently available for the correction of mitral insufficiency have been reviewed and their indications defined. ■

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The Lumpy Insulin Area Syndrome

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With increased knowledge regarding the nature of diabetes mellitus and improvements in products used for its control, one would expect that there would also be an accompanying improvement in diabetic care. However, such advances are unfortunately not always accompanied by such changes. In fact, there has been a corresponding lack of attention given to certain basic principles.

Among several overlooked or forgotten fundamentals, insulin technique deserves considerable attention in view of the tendency of many physicians to take it for granted that their patients are making their insulin injections as they should.

faulty insulin technique

Failure to teach correct insulin technique to patients is more often a major factor in poor diabetic control than is generally realized. A diabetic patient, who is not specifically taught or supervised as to the right way to inject insulin into himself, can very easily deposit the prescribed dosage either too deeply (intramuscularly) or not deeply enough (intradermally or into the subcutaneous fat). If insulin is improperly injected, it may become incarcerated in muscular, dermal, or adipose tissue instead of being allowed to get into the subcutaneous space where normal absorption can take place. This temporary trapping of insulin tends to occur especially when injections are made in the same location for several days. Some patients may continue to deposit insulin in the same place because they find that such areas are generally less sensitive. The patient is usually aware of lumpiness and swelling but may not consider the condition important enough to report it to his physician. In fact, if this difficulty is not thought of as a possibility, the physician may even overlook the condition during a general physical examination.

In order that diabetes may be smoothly controlled, a certain predictable amount of insulin must be made available to the body each day. If, however, insulin is deposited where its smooth release is not assured, a smaller than expected amount is utilized by the system. If such careless technique is persisted in, the attending physician may wonder why the blood sugar is not falling fast enough and may assume that the patient is resistant to treatment or that the daily dosage is not high enough. In the latter case he might increase the insulin dose perhaps every day, or every other day or so, in an attempt to bring the diabetic state under control. However, if the patient should exercise or traumatize the lumpy areas, insulin could be released suddenly into the system, resulting in a reaction. In such instances, the prescribed dosage would usually be lowered promptly. There is usually a rebounding of the blood sugar to high levels the next day due to the combined effects of lowered insulin dosage and stress produced by excess insulin action. Such a stress response can best be explained by a mechanism of rapid glycogenolysis mediated through the effect of the adrenal medulla on the liver and gluconeogenesis triggered by way of the anterior pituitary and adrenal cortex. Provided no additional trauma to the injection areas takes place, blood sugar levels tend to remain high even after this type of stress reaction has worn off.

When confronted with prolonged hyperglycemia such as this, the physician, unaware that insulin is being temporarily trapped due to faulty technique, would naturally tend to increase the insulin dosage again in an attempt to bring the blood sugar down. The result is a vicious cycle which can repeat itself many times before the true nature of the difficulty is recognized and corrected by someone familiar with the syndrome.

review of cases and suggestions

In a recent series of one hundred and five consecutive patients, who had been treated with insulin by one or more physicians previously, there were fifteen instances in which significant lumpiness was found. It is interesting that in each of these cases, the rapidly changing and

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The author is grateful to Doctors Blair Holcomb and John Partridge for their kindness and cooperation in permitting the use of their personal case material.

widely fluctuating blood sugar levels during the first few days of treatment were characteristic of labile or unstable diabetes. It is believed that the labile pattern was either associated with or aggravated by the faulty insulin deposits which became manifest just before these cases came under observation. Actually, the so-called lumpy insulin area syndrome may at times be responsible for apparent labile diabetes in cases which are fundamentally of the stable type.

In determining exactly what part insulin areas play in such cases it would be extremely helpful to know exactly how long it is possible for insulin to retain some of its activity after being improperly deposited. The idea of using tagged insulin to determine activity in incarcerated insulin deposits seems to have merit and it is hoped that such investigations will elucidate this problem more clearly in the future.

It is suggested that the insulin areas of diabetic patients be inspected frequently to be sure that injections are being made into the subcutaneous space and that the sites of injections are being rotated regularly. Failure to rotate injection sites cannot only precipitate the syndrome described but may be responsible for lipodystrophy in these locations when injections are made into areas of subcutaneous fat. The importance of proper instruction in insulin technique by the physician responsible for initial treatment cannot be overemphasized.

When trouble is found in the places where injections are being made, one should always at least consider the possibility of allergy to insulin preparations. However, its incidence is not as frequent as once believed. In fact, a considerable number of cases previously considered ones of allergy are undoubtedly examples of improperly deposited insulin.

summary

In fifteen out of one hundred and five diabetic cases recently treated with insulin, improper technique was found to be a significant factor in poor control.

Insulin which is not correctly injected into the subcutaneous space may be temporarily trapped and subsequently released following trauma, thus producing a syndrome which resembles labile diabetes in certain cases which are actualy stable. Such careless technique in labile cases may be responsible for an exaggeration of instability (or brittleness) and may render the patient's diabetes almost impossible to control while such practices are being persisted in.

The suggestion is made that the insulin areas of diabetic patients be inspected frequently and that those responsible for the initial treatment with insulin give adequate instructions regarding correct technique.

A chronological listing of events leading to the lumpy insulin area syndrome is as follows:

1. Improperly injected insulin becomes incarcerated in muscular, dermal or adipose tissues.

2. Blood sugar remains high in spite of seemingly adequate insulin dosage. (Insulin not readily available to the system).

3. Insulin dosage is increased in an attempt to bring the diabetes under control.

4. Minor trauma to insulin areas allows insulin to suddenly enter the subcutaneous space.

5. Reactions begin to occur and insulin dosage is lowered.

6. Blood sugar rebounds to high levels following insulin reactions (stress response involving rapid glycogenolysis and gluconeogenesis plus effect of lowering the insulin dosage).

7. Patient continues to inject insulin where it cannot be utilized promptly by the system.

8. Hyperglycemia tends to persist even after stress response has subsided.

9. Insulin dosage may unwittingly be increased again, thus precipitating a vicious cycle. ■

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Prevention of Atelectasis by Trans-tracheal Injections

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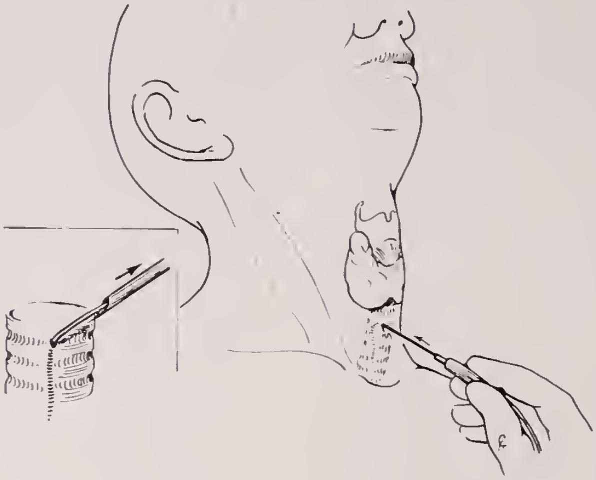

During the past two years several hundred postoperative, thoracotomy patients have been stimulated to cough by trans-tracheal injections of various liquids. These injections have been made through small polyethylene tubes inserted percutaneously through the lower anterior midline cervical region into the trachea.[1] Commercially prepared, medium sized catheters with a 17 gauge needle and sterile plastic tube originally intended for "medical cut downs" for administration of intravenous fluids have been adopted to the "medical tracheotomies." The only modification required is reduction of length of some of the longer plastic tubes to about six inches to prevent the patient from coughing up the tube through his glottis and swallowing it, thereby misplacing the injections.

The needle is inserted into the trachea at the same level employed for surgical tracheotomy, pointing the needle somewhat cephalad to penetrate the trachea at right angles in its somewhat obliquely posterior course across the lower cervical region. Following insertion of the tube the needle is pulled out, taped to the skin and used for attachment of syringes for intratracheal injections.

Two cubic centimeters of various types of liquids, such as sterile water, saline, surface tension reducing agents or mucolytic substances are injected about every four hours during the early postoperative periods with very gratifying results. Patients who would otherwise require long periods of coaxing to produce a very weak and ineffectual cough now expectorate large mucus plugs very readily as soon as the fluid touches the coryna. Intratracheal suctioning with its attendant risk of staphylococcal contamination of the tracheo-bronchial tree is avoided, except in those patients who are too weak to cough even after an effective stimulus.

Acetyl cysteine* has been the most effective solution found to date, since it has not only the slightly irritating action of saline or water to induce the cough, but also the mucolytic properties which actually liquify the mucous plugs located in the smaller bronchioles.[2] Acetyl cysteine can be introduced very effectively through a bronchoscope for the same purpose, or can be inhaled as an aerosol spray by means of a nebulizer, but it seems somewhat more effective when used as a direct, intratracheal instillation.

summary

Trans-tracheal injections of slightly irritating liquids, particularly mucolytic agents, have proved very effective in preventing postoperative atelectasis in post thoracotomy patients, and reduced the necessity for bronchoscopic aspirations. ■

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*Acetyl cysteine obtained from Mead Johnson Laboratories on research basis.

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Uterine Cytology and the Follow-up

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Screening female patients for uterine carcinoma by cytologic methods has become a part of the routine physical examination done by most physicians. Quite frequently there may be unfamiliarity with the significance of the various cytology reports, with the proper method of follow up study, and with certain limitations of cytology in cancer detection. As a consequence, improper or inadequate surgical diagnostic procedures may be used and, more seriously, delay in diagnosis may occur.

It is difficult to answer the question as to what age group should be included in routine screening for uterine carcinoma. Peak age incidence of in-situ carcinoma of the cervix is from thirty five to forty years, invasive carcinoma from forty five to fifty years. There is, however, a significant incidence of these lesions in women under thirty. Therefore, I do not feel the test should be denied any woman over the age of twenty. Reports on various series in which routine screening has been employed indicate that, on initial screening, one in every two to three hundred women will have a malignancy.[1] Majority of the lesions will be in-situ carcinoma of the cervix.[2]

limitations

It is important to realize that exfoliative cytology is primarily useful in screening patients who do not have clinically obvious or suspicious signs of pelvic malignancy. It does not replace other appropriate diagnostic studies when such signs exist. For example, a woman having abnormal uterine bleeding (any uterine bleeding in post menopausal years is abnormal) requires curettage to exclude endometrial carcinoma. Likewise, if a grossly suspicious cervical lesion exists, specimen should be taken for biopsy. In these cited examples cytology should be employed for supplemental information only. In the face of a clinical situation arousing suspicion, a negative cytology report should be ignored.

For reasons of relative incidence and anatomic relationships, cervical-vaginal cytology is concerned primarily with the detection of in-situ or in early invasive squamous cell carcinoma of the cervix. It can be useful in the detection of adeno carcinoma of the uterine body. Very rarely a tubal or ovarian carcinoma is suspected on the basis of cytologic study. However, cytology appears to offer little to early detection or improved treatment result in ovarian malignancies. In addition to cancer detection, cytologic studies offer useful information on hormone effects present as well as some idea of the morphologic types of bacteria present in the vagina.

reliability

Reliability of this screening method in detecting lesions of the cervix is of very high order. Various reported series indicate that a false negative cytology report will occur in less than five per cent of proven cervical carcinomas.[2] It must be re-stressed, however, that where a lesion exists it should be examined by biopsy regardless of cytologic reports. This is particularly true when there is evidence of gross infection in the lesion or in cases of uterine carcinoma being studied for evidence of recurrence after radiation therapy. In such situations, inflammatory reaction in the cervix so obscures the cytology that false negative reports may result.

endometrial lesions

Reliability of this method in excluding an endometrial lesion is considerably less than with cervical lesions. Some reports indicate that as many as 35 to 40 per cent of endometrial carcinomas may be missed by cytologic methods. The reliability of cytology in detecting endometrial carcinoma can be improved by taking endometrial cavity aspirations; however, this is a method not ordinarily employed for routine screening.

technique

The technique of making smears has been described in numerous publications.[3] Briefly; two clean slides should be used. Material from the posterior fornix (pool) obtained by Ayre spatula, or a similar applicator, is spread evenly on one slide. Using the same applicator, additional material should be obtained from the external os and spread on the second slide. As each slide is made it should be inserted *immediately* into the fixative. The slide should then be delivered to the laboratory after fixation according to the method preferred by the laboratory technician. A brief discussion with the person in charge of cytology at your laboratory should permit clarification of these details.

Table 1. Follow-up program

Papanicolaou class	Pathologists' class	Follow-up	Comment
I II	negative	annual re-check	Ignore negatives if there is post-menopausal bleeding or clinical suspicion.
III	suspicious	repeat smear	If suspicion remains or there is positive report, study as positive. If negative, recheck one or more times within three months.
IV V	positive	conization, D and C. Omit conization if endometrial carcinoma suggested	

Interpretation of the various cytologic reports represents a problem at times. Many pathologists employ the classification of negative, suspicious and positive. These are related to Papanicolaou methods[4] of reporting by classes, as shown in table 1. Tabulation also attempts to indicate the usual follow-up study which should be used. Class III (suspicious report) may offer particular confusion to many because of the uncertainty suggested by the report. Such a report cannot be ignored or dismissed from further consideration since approximately one half of the patients with this report, will prove to have uterine malignancy upon completion of the study. The report does indicate, however, that the pathologist is less certain of the significance of the changes present and usually, therefore, will advise a repeat smear for further study. If such a smear report is obtained on a patient who has severe cervicitis or vaginitis, especially if due to *Trichomonas Vaginalis* or senile changes, the report may be viewed initially with greater reservation.

It is justifiable and advisable to attempt to clear these inflammatory changes with conventional therapy before making the second smear in a month or six weeks. The loss of time associated with these treatments cannot be construed to be deleterious to the best interest of the patient who is without clinically obvious signs of malignancy. On re-check, the smear may be reported negative or reported again as Class III (suspicious) or positive. With the latter two reports it is necessary to rule out malignancy by tissue study.

biopsy

Tissue studies must be undertaken when a patient's report indicates suspicious or is positive for malignancy. Methods of obtaining the specimen will vary with circumstances. On clinically negative patients, in the pre-menopausal years, this study usually should consist of a cold knife conization followed by curettage. With a post-menopausal patient who has no gross cervical lesion and who has signs *suggestive* of an endometrial lesion, such as uterine enlargement, bleeding from the os, or ready bleeding on sounding the uterus, the preferred procedure should be dilitation and curettage. A cervical conization is not indicated for endometrial lesions and may interfere with the best treatment result.

The curettage preferably should be fractional in an effort to obtain tissue separately from the endo-cervix and endometrial cavity as an aid to planning therapy. The appropriate plan of study will ordinarily be quite apparent upon review of clinical findings.

If a suspicious lesion of the cervix is examined by biopsy and the tissue reported as in-situ carcinoma it is necessary to perform conization and curettage to rule out invasion at a point missed by the punch biopsy.

Furthermore, if the punch biopsy is negative but the smear is positive, it is again necessary to perform conization and curettage to rule out either in-situ or invasive carcinoma at a point missed when the specimen was taken.

The necessity for these additional steps should not discourage one from using biopsy if a suspicious lesion exists since it reduces to the minimum the conization of invasive lesions. They are affected adversely by the procedure.

conization

Cold knife conization followed by curettage is a hospital procedure requiring particular care to minimize the postoperative complications of infection and hemorrhage. It has been my policy to admit the patient to the hospital on the day before operation for preoperative study and operative site preparation which consists of aqueous benzalkonium chloride douche followed by an oxytetracyclene vaginal tablet. On the following day, in the surgical suite, vaginal preparation should be by pitcher douche technique rather than any type of scrubbing of the cervix and vagina with a sponge or stick or other instrument. Such rubbing about the cervix with gauze sponges can remove substantial portions of the areas which are most important to the pathologic study.

The cervix and upper vagina should then receive a Schiller stain application to delineate the extent of conization necessary and to aid in detection of possible multicentric lesions upon the cervix or adjacent vaginal wall. The cold knife conization should in all cases precede the curettage. Special coning instruments have not been found useful since most of them are adapted to the perfectly symmetrical nulliporous cervix which rarely harbors cervical carcinoma. A number 11 straight scalpel blade has been found most satisfactory for conization. Following removal of this tissue, the dilatation and curettement should be carried out.

During this time, rather firm traction on the cervix greatly minimizes the bleeding from the conization site. Efforts to obtain hemostasis for conization have included, suture of cervix, injection of saline or neosynephrin, and gelatin foam or other type packs. I have found minimal difficulty with post operative bleeding or infection by employing two lateral angle Sturmdorf sutures of number 1 chromic catgut. Such a suture is readily applied and controls all major bleeding immediately. An occasional patient will require a figure 8 suture in the anterior or posterior lip or both. Following this, a vaginal pack is inserted against, but not into the cervix.

The pack is removed on the day following the operation and one day later the patient is instructed to douche daily with vinegar solution for seven to ten days. Using this technique, only one patient in approximately fifty five conizations has required admission to the hospital for hemorrhage. There have been no problems of cervical infection requiring antibiotic or other therapy.

In submitting the conization tissue specimen it is important to advise the pathologist the purpose for which the conization was accomplished so that adequate numbers of sections are made. Such a tissue study will reveal the source of atypical cells in most instances. In some instances the tissue report will indicate only areas of atypical epidermidalization or similar changes. Thus, occasional associated false positive smear reports must be accepted as the price for early diagnosis in such an important lesion.

valuable screening

Cytology provides a valuable screening aid in the detection of early uterine carcinoma. No therapeutic procedure, such as hysterectomy or radium insertion, should be carried out until appropriate tissue studies have determined the nature and extent of the malignant lesion. With such knowledge the clinically early and more easily cured lesion can receive adequate therapy. Certainly, the essence of good cancer therapy is use of the best form of therapy on the first occasion of treatment. A patient with report of suspicious or positive cytology cannot be considered such an emergency as to require therapy within a few days. The possible value of earlier therapy is completely lost if it is improper. ■

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Pulmonary Physiology in Clinical Practice

VIa. Recognition and Treatment of Respiratory Failure

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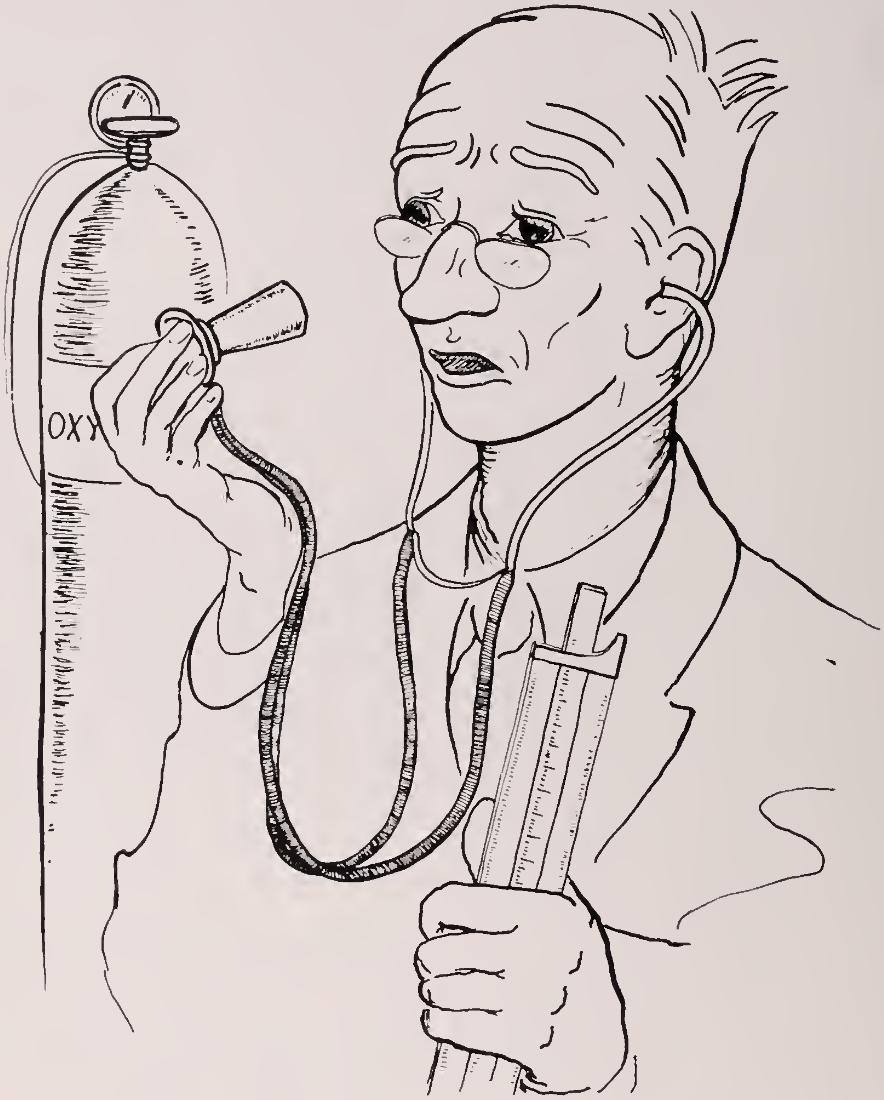

And the Lord God formed man of the dust of the ground, and breathed into his nostrils the breath of life; and man became a living soul. GENESIS 2:7

While its role is critical to life, the respiratory system of man is at the same time more subject to assault than any system of the body, except possibly the integument.

Infectious disorders involving the respiratory tract occur more commonly than infections of all other organ systems combined. The airways are frequently exposed to damage from noxious and irritating gases and particulate materials contaminating the inhaled atmosphere. The relationship of the pulmonary circulation to the dynamics of the cardiovascular system is such that interference with the function of the alve-

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From the Cardio-Pulmonary Laboratory, Providence Hospital Heart Center, Seattle.

olar-capillary unit is a frequent consequence of the failing heart.

The mucous membrane and smooth muscle of the respiratory tract are often the end-organs responding in immunologic or allergic disorders. The pulmonary circulation is the repository of emboli originating in the systemic veins. Parasitic infestation, neoplastic invasion, congenital abnormalities, familial disorders, trauma, neurologic injury or disease, muscular disorders, and even emotional conditions may attack this vital system.

Impairment of gas exchange results from breakdown of the system at one or more of four levels.[1,2] First, transport of gases through the airways may be decreased in rate or amount. Second, gases may not be brought in so as to distribute them uniformly in relation to the pattern of pulmonary capillary bloodflow. Third, the alveolar-capillary membrane may not permit enough gas to diffuse through it, either because the membrane becomes less permeable, or because its total surface area is reduced. The fourth reason for failure to arterialize venous blood is the presence of shunts in the vascular system which bypass exposure of the blood to aerated alveoli. Treatment directed toward correcting whichever of these may be present will lessen disability and may save life.[3]

clinical effects of respiratory failure

The clinical manifestations of impaired pulmonary function result from 1) hypoxia, 2) carbon dioxide retention, and 3) compensatory increase in muscular effort required to maintain function.

Extreme fatigue and physical exhaustion with effort are prominent early symptoms of hypoxia. Patients may complain of anorexia and headache. Tachypnea and tachycardia will be noted.

Polycythemia develops with prolonged oxygen deprivation. Clubbing of the fingers is associated with increased bloodflow in the terminal phalanges. While the exact mechanism is not fully understood, this condition frequently accompanies persisting hypoxic states. Cyanosis may be visible when arterial oxygen saturation drops below 85 per cent.

Mild mental confusion, anxiety, and occasionally hallucinations may occur. The sensorium remains fairly clear, however, and consciousness usually persists in patients who are hypoxic without hypercarbia, in marked contrast to those who also have carbon dioxide retention.[4]

hypercarbia

Retention of carbon dioxide results from impaired alveolar ventilation or abnormal ventilation-perfusion ratios. These conditions are evoked by 1) mechanical impairment of ventilation from infections, status asthmaticus, atelectasis, pneumothorax, thoracic surgery, anesthesia, or neuromuscular disorders; 2) hypoventilation associated with congestive heart failure; 3) depression of the respiratory center by drugs or central nervous system disease or injury, and 4) interference with the chemoreceptor response to hypoxia in chronic respiratory disease by breathing high concentrations of oxygen.[5]

When CO_2 retention is added to the picture, a wide spectrum of neurological changes becomes apparent. The mental state may be marked by depression, irritability, anxiety, sleepiness, confusion, delirium, and finally coma. Motor changes may vary, and include fine tremor of the facial muscles, jerking of fingers and arms, "flapping" tremor, gross clonic movements of the limbs, and generalized convulsions. When the patient lapses into deep coma there may be generalized flaccid immobility. Cortical activity is depressed, and cortical stimulation is antagonized.

As the patient becomes comatose, the pupils are usually constricted, but later full dilatation may appear. Corneal reflexes are lost. Tendon reflex responses may decrease or disappear, and occasionally a Babinski reflex is seen. Carbon dioxide acts as a cerebral vasodilator and increases cerebrospinal fluid pressure; this probably accounts for the pappiledema sometimes present. The retinal vessels may become engorged and of darkened color.

The skin is warm and flushed. Tachycardia is present. Persistent, severe hypotension may complicate the picture.

Generally, a patient will not show changes of his mental state other than slight drowziness and confusion until the P_{CO_2} rises above 90 mm Hg and the pH drops below 7.25. If the CO_2 tension becomes greater than 130 mm Hg and the pH lower than 7.14, coma is to be expected.

During recovery from CO_2 narcosis, however, a patient may remain comatose after the P_{CO_2} drops to a level lower than would ordinarily produce symptoms. This lag time in regaining consciousness usually occurs if the patient has been comatose for more than one hour.

dyspnea and cough

Dyspnea is probably the subjective sensation associated with increased work of breathing.

Coughing is a physiologic reflex mechanism which in healthy individuals serves to eject foreign material from the upper airways. In respiratory disorders it may be caused by inflammation of the tracheobronchial tree at different levels. With failure of the coughing mechanism, retained secretions obstruct airways and interfere with alveolar ventilation.[6]

ventilatory failure

Inadequate transport of gases to and from the alveoli results from airway obstruction, unfavorable changes in lung volumes, or failure of the neuromuscular bellows mechanism. The first of these three is the most common culprit.

The airways may be obstructed intraluminally or extraluminally at any level.[7] Particularly in acute airway obstruction, the higher up in the tracheobronchial tree the blockage to airflow occurs, the greater the immediate threat of asphyxia. For obvious reasons, complete occlusion of the trachea above the carina persisting for more than a few minutes is incompatible with life.

In chronic respiratory disorders, the airways may be obstructed by bronchospasm, edema of the bronchial mucosa, accumulated mucus and bronchial secretions, and the checkvalve mechanism occurring during expiration due to the difference between intraluminal and extraluminal pressures on the walls of the tubes.[8] Other possible causes include bleeding, edema fluid, tumors, and peribronchial lymph nodes.

Lung volume may be reduced by processes stiffening the lungs or interfering with movement of the thoracic cage or pleura. These include traumatic injuries to the sternum, ribs, or spine, kyphoscoliosis, rheumatoid spondylitis, abdominal distention and obesity, pachypleuritis, pleural effusion, silicosis, asbestosis, berylliosis, sarcoidosis, progressive systemic sclerosis, and pulmonary fibrosis resulting from any other lung disease.

The thoracic bellows may fail to function because of interference with neurogenic control or lack of strong enough muscular response due to intracranial disease, drug intoxication, polio, polyneuritis, myasthenia gravis, muscular dystrophy, or generalized weakness and debility. Paralysis of the respiratory muscles may be due to curare-like drugs administered during anesthesia.

clearing the airway

Before any type of assistance to ventilation can be effective the airways must be open. In emergency situations such as severe carbon dioxide narcosis, immediate bronchoscopy may be required for removal of mucous plugs and secretions. Bronchodilator aerosols may be sprayed through the bronchoscope into the distal airways.

If the patient is comatose or unresponsive the trachea should be intubated for suctioning and to keep it open. The endotracial tube should be cuffed if a respirator is to be used. If intubation is not feasible, tracheotomy should be carried out.

nebulization therapy

Nebulization provides a method of getting liquid material into a physical form which enables it to be carried through the airways with inhaled gases. The three most important substances which are introduced into the lungs by this route are *bronchodilator drugs, water*, and *wetting agents.*

The role of the bronchodilator drugs is obvious. It is not too commonly appreciated, however, that inspired gas must become saturated with water vapor during its course through the respiratory tubes. Even if the atmospheric gas is completely saturated with water when inhaled at the mouth (which is not usually the case), unless the ambient temperature is the same as that of the body or greater, additional water is required to saturate the gas as its temperature becomes elevated. Since this additional water is taken up inside the bronchi and bronchioles, its extraction results in the drying and hardening of secretions, making their expulsion more difficult and increasing the likelihood of airway obstruction.

In the past, antibiotics have been administered by aerosol inhalation. This is now known to carry the risk of increased sensitivity reactions, and furthermore, administering antibiotics this way probably has no advantage over oral or parenteral methods.

In certain conditions, (e.g. *Aerobacter aerogenes* and *Pseudomonas aeruginosa* infections) digestive enzymes may be added to the nebulizer to break up unusually thick and viscid secretions.[9]

The two most commonly used bronchodilator drugs are isopropylarterenol hydrochloride (Isuprel), 1 to 200, and racemic epinephrine (Vaponefrin), 2.25 per cent solution. Various substances have been used as wetting agents. These include Triton WR-1339 (Alevaire), cetyl pyridinium chloride (Ceepryn), benzalkonium chloride (Zephiran), and ethanol.

A simple method of preparing a 20 per cent alcohol mixture for use as a wetting agent in the nebulizer is to mix equal parts of water and 80 proof vodka. A theoretical hazard in the use of surface tension-reducing substances in the aerosol mixture, however, is its possible deleterious effect on the surfactant lipoprotein which lines the alveoli and prevents their collapse.[10]

It has been demonstrated that the size of particles in an aerosol mist determines its effective absorption.[11] Particles larger than 8 microns in diameter will settle out in the mouth and oropharynx. Those between 3 and 8 microns tend to be deposited along the walls of the trachea and large bronchi. Droplets ranging between 1 and 3 microns in size are ideal for treatment purposes, as they tend to precipitate out in the bronchiolar areas. Smaller particles are carried all the way to the alveoli, but are mostly ineffectual because they remain in suspension and are carried back out with the expired air.

It is also necessary that the majority of particles be of uniform size; otherwise the smaller particles collide and coalesce with larger ones, causing precipitation and loss of material from the mist.

administration of aerosol mists

A program of inhalation treatment, intensively carried out, often fails to produce expected results because the aerosol mists are not inhaled in the most effective manner. When the patient is instructed to take consecutive deep breaths of the mist from the nebulizer, it has been shown that there is a rise in position of the lungs from which inspiration begins. This increases functional residual capacity and produces air trapping. (See Fig. 1, Part II. With consecutive deep breaths the lines enclosing tidal volume become farther apart but both rise.) This results in poor distribution and penetration of the nebulized material.

More effective results are obtained by the expiratory-inspiratory pause method (EIPM).[12] Here the patient is instructed to exhale fully, but not forcibly, and to follow with a slow, natural inspiration, with no attempt to reach maximal inhalation. At end of inspiration, the breath is held for one to two seconds before exhaling. It should be emphasized that the exhalation not be preceded by deep inspiration, since this causes air trapping. This method of aerosal administration has been found to result in 85 per cent absorption of nebulized material in contrast to only 40 per cent absorbed by the repeated deep inspiration method first described.[13]

Prompt achievement of maximal penetration and retention is particularly important if bronchodilator drugs administered as aerosols are to be optimally effective. Otherwise, systemic overdosage with the bronchodilator drug may result from persistent but less effective use.

nebulization equipment

There are a number of reasonably effective nebulizer devices available, many of which are sold in most drug stores. It is important, however, to ascertain that the particular nebulizer meets necessary standards as to the size of aerosol particles produced.

Some source of gas under pressure is necessary for production of the nebulized mist. When nothing else is available a hand bulb may be used. This method has the disadvantage of making administration of treatment so much effort for the patient that he may elect to pass up using it as often as he should, rather than face squeezing the bulb by hand for the prolonged periods required.

Various types of small blower motors designed for other purposes (paint sprayers, hair dryers, vacuum cleaners) may be modified for use as compressors with nebulizers. In addition, there are several compressors specifically designed and manufactured for this purpose.

Probably the most effective method of administration of aerosol mists is the use of one of the intermittent positive pressure breathing (IPPB) devices.[14] For the average ambulatory patient who is able to carry out the described EIPM method using a nebulizer with a simple compressor pressure source, there is probably not enough advantage obtainable from the IPPB apparatus to justify its expense.[15]

There are some patients, however, whose condition prevents adequate intake of aerosol mists by volitional inspiration, because of shallow tidal volume, inability to pause and hold the breath between inspiration and expiration, or other factors. IPPB provides a most effective means of aerosol treatment for these people. Use of this apparatus also takes over part of the work of breathing during inspiration, relieving the patient of some of the muscular effort involved.

frequency of aerosol therapy

I feel it is important to interject at this point a word about frequency of administration required for effective treatment.

For patients who have large amounts of thick, sticky, bronchial secretions, aerosol inhalations should be provided as often as necessary to keep the inspissated sputum liquified, so that it can be sucked out often enough to keep airways clear. This may require continuous nebulization, with intermittent interruption to aspirate the tracheobronchial tree.

On the other hand, I do not feel that there is any logical value at all in using aerosol therapy for chronic respiratory disease, if treatments occur less frequently than two or three times daily. The use of IPPB respiratory equipment for aerosol administration on an outpatient basis once or twice a week seems somewhat analogous to treating heart failure by weekly intravenous injections of cedilanid. If aerosol therapy is to be efficacious (with or without IPPB for administration) it must be carried out by the patient in the hospital, or at home (or sometimes even at his work), where it can be used often enough to do some good.■

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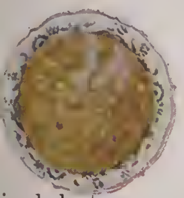
This series will be concluded with publication of part VIb in the July issue.



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Oregon State Medical Society—2164 S. W. PARK PLACE, Portland 5, Oregon

PRESIDENT *Melvin W. Breese, M.D., Portland*
SECY.-TREAS. *James H. Seacat, M.D., Salem*
EXECUTIVE SECRETARY *Mr. Roscoe Miller, Portland*
annual meeting, September 25-28, 1963, Portland

Oregon Joint Committee on Health Problems in Education

The Oregon Joint Committee on Health Problems in Education was created by action of the Oregon Education Association and the Oregon State Medical Society Saturday, May 18, 1963.

Such action to establish a joint committee was stimulated by the relationship which had been created by the National Education Association and the American Medical Association in 1912 when they founded the National Joint Committee which was formed to study and make recommendations regarding the health of school age children.

The National Joint Committee developed standards which have been widely followed by the schools of the nation in the conduct of school health programs. They have published numerous books and pamphlets on school health and physical fitness which have been used as guides for school health people and as text books by teacher training institutions.

The official representatives of the Oregon Education Association in attendance at the meeting were W. E. Burke, Ph.D., Eugene, Director of Physical Education and Health of the Eugene Public Schools; Mr. Charles Hinds, North Bend, Third Grade Teacher of the Coos Bay Public Schools; William D. McArthur, Ph.D., Monmouth, Professor of Health and Physical Education at Oregon College of Education; and Mrs. Betty Owen, Salem, supervisor of Health and Physical Education with the State Department of Public Instruction. Cliff Robinson, Ph.D., Klamath Falls, Superintendent of the Klamath County Schools and a member of the Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association; John F. Abele, Portland, also a member of the National Joint Committee; Edgar M. Rector, Portland, Chairman, Committee on Child Health of the Oregon State Medical Society; James H. Stewart, Hillsboro, Washington County Health Officer; and George C. McCallum of Eugene, were in attendance as the official representatives of the Oregon State Medical Society. M. Donald McGeary of Phoenix was unable to be present.

In addition, Melvin W. Breese of Portland and Daniel K. Billmeyer of Oregon City, President and President-elect respectively of the Oregon State Medical Society, and Mr. Roscoe K. Miller, the Society's Executive Secretary were likewise in attendance. C. W. Posey, Ph.D., Executive Secretary of the Oregon Education Association was unable to be present.

Dr. Breese presented greetings from the Oregon State Medical Society in which he emphasized the Society's interest in all aspects of matters relating to the health of the school age child as well as public health generally. He expressed his pleasure that the official representatives of the professional associations of teachers and physicians were engaged in a discussion of matters of mutual interest and a hope that the deliberations would be fruitful in fostering programs and activities of the advantage of the school children of Oregon.

Dr. Abele suggested that the Joint Committee, prior to discussing organizational structure and related matters, consider the functions which it might undertake and the nature and status of any of its deliberations. With respect to the functions of the joint committee Dr. Abele presented the following for discussion:

1. To provide a means for interchange of information between the professions of education and medicine on matters related to the health of children and youth.
2. To develop effective liaison beween the various Committees of Oregon Education Association and

Continued on page 454

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Continued from page 451

the Oregon State Medical Society on school health problems.

3. To serve as a board of review on controversial issues with medical and educational implications to which educators, physicians and others concerned with school health may submit inquiries in regard to policy health matters.

4. To promote cooperation and to foster helpful relationships among medical, education, public health, health-science and other groups concerned with school health.

5. To participate with other qualified or recognized groups, having a continuing interest in school health, in developing and implementing sound principles and programs.

6. To formulate and issue statements setting forth principles and policies as the best conclusions available from research, knowledge of child growth and development, or experience and opinion in the field.

7. To cooperate with appropriate groups in furthering adequate preparation in school health for administrators, teachers, and health service personnel.

It was voted to accept the functions as developed by Dr. Abele tentatively subject to appropriate revision as might be dictated by the Joint Committee's experience.

Relative to the status of the Joint Committee's deliberations, recommendations and channels of operation, it was voted that the Committee should consider itself as a forum for the open discussion of health problems in education. In this connection, the Joint Committee voted to recommend that the following channels of operation be followed:

1. That the Joint Committee, upon its own motion, could initiate topics for discussion.

2. That the Joint Committee would accept topics for discussion referred to it from the Oregon Education Association, the Oregon State Medical Society and from other organizations and agencies interested in health problems in education.

3. That the Joint Committee, after due deliberation, could develop recommendations which would be submitted to the Association and Society policy-forming bodies for consideration.

4. That the Joint Committee may issue statements to organizations and to the public following the adoption of its recommendation by the Association and Society policy-forming bodies.

5. That the implementation of any recommendations issued and officially adopted be through the procedures afforded by the Association and the Society.

6. That reports of the Joint Committee's activities and any news media releases regarding them be disseminated or released under the direction of and through the customary policies and practices of the Association and the Society.

During the discussion of the organizational structure and related matters, the Joint Committee voted to create the offices of chairman and chairman-elect with these officers to alternate between the Association and the Society. Thereupon John F. Abele was duly elected chairman to serve for a period of one year and W. E. Burke was duly elected chairman-elect to serve for a like period.

In discussing the administrative responsibilities and resources, the Committee voted to request that the executive staffs of the Oregon Education Association and the Oregon State Medical Society be authorized to function as secretaries of the Committee and that the resources of the respective headquarters offices be made available to the Committee for such secretarial services as may be required.

The members of the Joint Committee then proceeded to consider the areas of health problems in education which might claim its attention. It was generally agreed that the Committee should divide its activities into (a) critical problems and (b) long range problems. For this purpose the Committee decided to accept the traditional areas into which health problems in education are normally divided. They are as follows:

a. Health of school age child.
   (1) School health services.
   (2) Healthful school living.
   (3) Health education.
b. Physical education and fitness.
c. Formal and inservice professional training.

For its first and immediate subject for consideration, the members of the Joint Committee selected "school health services" inasmuch as it is the phase of health problems in education in which most questions and issues are currently arising. In this connection the Committee voted to undertake the following projects:

1. Obtain and supply each member of the Joint Committee with information regarding the current policies and practices related to school health services in Oregon as outlined in the booklet, "Health Services for the School Age Child in Oregon" published by the State Department of Education and the Oregon State Board of Health and other recognized resources on the subject which may be available.

2. Obtain reports of experiences and problems in school health services from school administrators, health departments, and local medical societies in Oregon for the consideration of the Joint Committee at its next meeting.

3. To suggest to city and county school superintendents and the presidents of component medical societies in Oregon that they confer prior to the opening of the 1963-64 school year to consider local

policies and practices and develop an understanding and a mutual acceptable approach to school health services in their respective communities and schools.

The members of the Joint Committee also voted to adopt the following motions:

1. That the establishment and organization of the Joint Committee be reported in the house organs of the Association and the Society and that an appropriate news release be issued to the news media.

2. That members of both the Association and the Society be advised individually of the establishment of the Committee and the work it is planning to undertake.

3. That the Association and the Society subscribe on behalf of each individual representative on the Joint Committee to the *Journal of School Health* published by the American School Health Association.

4. That the Committee hold its next meeting on Saturday, September 14, 1963, at 1:30 p.m., in the headquarters office of the Oregon Education Association.

Bob Bissell joins OSMS staff

Mr. Robert O. Bissell is now Associate Executive Secretary of the Oregon State Medical Society. He will work with Mr. Miller in the fields of public and intraprofessional relations.

His education and experience have given him excellent preparation for his current responsibilities. He is a graduate of Lewis and Clark College where he majored in business administration and journalism. For the past seven years he has been an account executive and public relations representative for the Portland advertising firm of Cole and Weber. His contacts there were with local, state, and national clients. He taught night school classes in advertising and public relations for three years at Lewis and Clark.

Mr. Bissell has been active in civic affairs and is well known in Portland. He has served as education director for the Oregon Advertising Club, has held directorships of public relations, religious activities, and school activities for the Portland Junior Chamber of Commerce and is currently a member of the board of trustees of the Portland Civic Theater. He has been active in Boy Scouts, United Good Neighbors, YMCA, First Methodist Church of Portland, Young Republicans and the Alumni Council of Lewis and Clark College. He is married to the former Mary Herring of Gresham, and they have two daughters, Kimberly Ann, aged three, and Kelly Sue who is one.

OBITUARIES

DR. DAVIS GRISSO, *81, of Portland, died of pneumonia, gram negative bacteremia, acute pyelonephritis and carcinoma of the rectum, on March 22. His medical degree was granted by the Fort Worth School of Medicine in 1914, and he was licensed in Oregon in 1922. Dr. Grisso was a veteran of World War I. He retired from active practice in 1956.*

DR. JAMES M. ODELL, *74, died in The Dalles March 15. He received his medical degree from Jefferson Medical College of Philadelphia in 1917. He served as superintendent at Eastern Oregon Tuberculosis Hospital for 25 years prior to his retirement in 1959. He was a senior member of American Trudeau Society and fellow-emeritus of American College of Chest Physicians in addition to active participation in various community affairs.*

DR. DELMAR F. PARKER, *of Salem, died February 8, of carcinoma of the prostate and congestive heart failure. He was 53. He was a native of Medford but took his premedical training at the University of Alabama. His medical degree was granted by the University of Oregon Medical School in 1937. He was employed by the Oregon State Department of Education in vocational rehabilitation.*

DR. MABEL MONTGOMERY AKIN, *of Portland, died February 17, at the age of 88. She was the widow of Dr. Otis Akin, who died in 1949. Her death was due to mesenteric thrombosis. Although retired, she continued her interest in Lewis and Clark College where a woman's dormitory, Akin Hall, had been named for her in recognition of her gifts to the school. She was a past-president of the American Medical Women's Association.*

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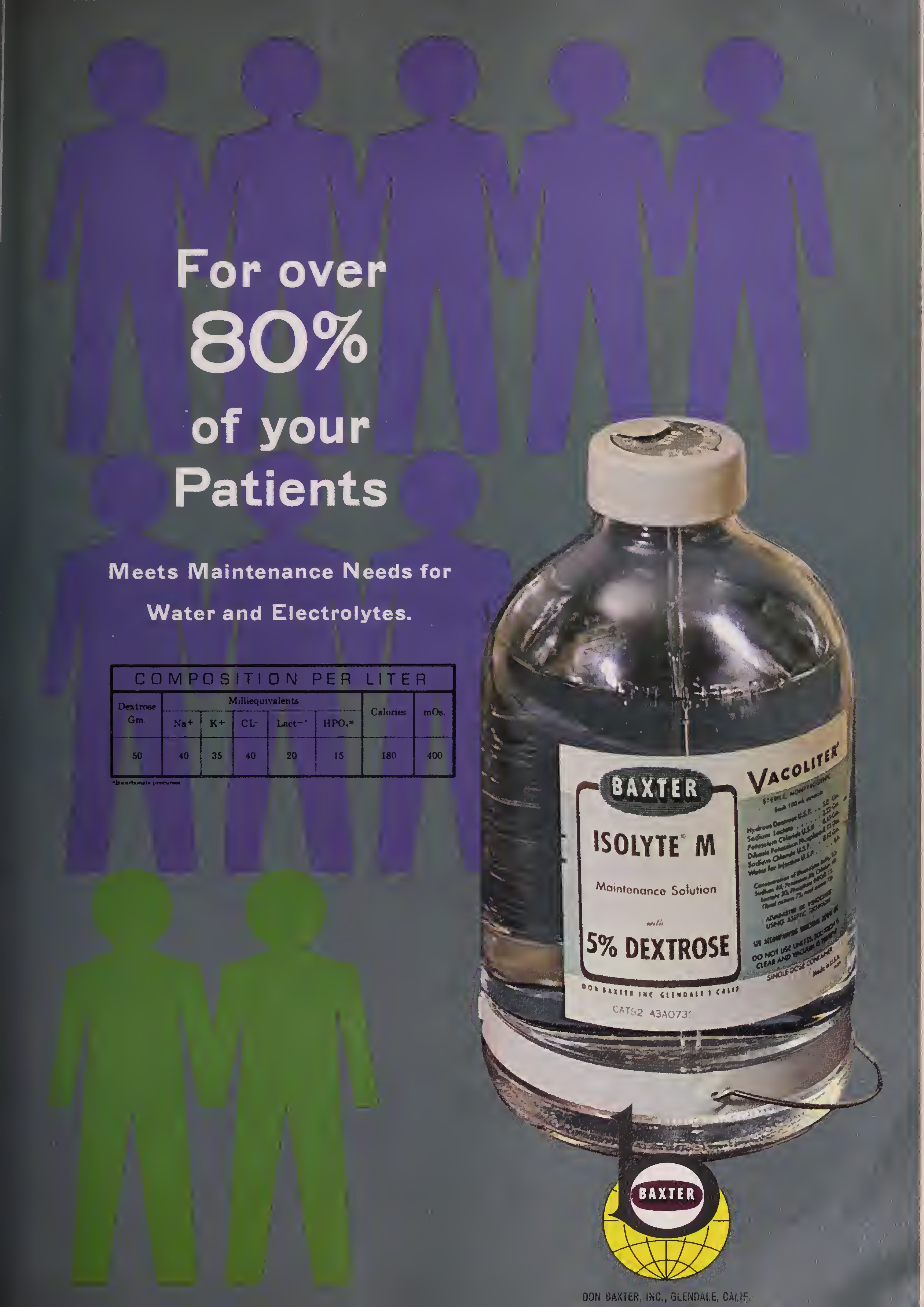

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annual meeting September 15 - 18, 1963, Seattle

U W postgraduate courses in July

Two postgraduate courses are being offered at the University of Washington School of Medicine. The first, to be held at the Health Sciences Auditorium, July 12 and 13, is on pigmentary and neoplastic diseases of skin. The program follows:

Friday, July 12, 1963

9:10- 9:40	Biochemistry and Physiology of Pigmentation	*Aaron B. Lerner, M.D.*
9:40-10:10	Inborn Errors of Pigment Metabolism	*Frank Parker, M.D.*
10:40-11:30	Hormonal Control of Pigmentation	*Aaron B. Lerner, M.D.*
11:30-12:15	Panel Discussion—Problems of Hyper and Hypopigmentation	*Aaron B. Lerner, M.D.* *George F. Odland, M.D.* *Frank Parker, M.D.* *John M. Shaw, M.D.*
2:00- 2:40	Moles and Melanomas	*John M. Shaw, M.D.*
2:40- 3:10	Surgical Management of Melanomas	*James R. Cantrell, M.D.*
3:10- 3:50	Common Benign Tumors of the Skin	*Robert T. Potter, M.D.*
3:50- 4:20	Premalignant Tumors of the Skin	*Robert A. Pommerening, M.D.*
4:20- 5:20	Panel Discussion	*James R. Cantrell, M.D.* *Robert A. Pommerening, M.D.* *Robert T. Potter, M.D.* *John M. Shaw, M.D.*

Saturday, July 13, 1963

9:00- 9:30	Basal Cell Epithelioma	*William B. Baker, M.D.*
9:30-10:00	Squamous Cell Carcinoma of Skin and Mucous Membranes	*Orliss Wildermuth, M.D.*
10:20-10:40	Plastic Surgical Approach to Carcinoma of Skin	*Robert V. DeVito, M.D.*
10:40-11:00	Radiologic Approach to Carcinoma of Skin	*Robert G. Parker, M.D.*
11:00-11:30	Cutaneous Manifestations of Internal Malignancy	*Aaron B. Lerner, M.D.*
11:30-12:00	Mucocutaneous Manifestations of Lymphomas	*George F. Odland, M.D.*
12:00-12:30	Panel Discussion	*William B. Baker, M.D.* *Robert V. DeVito, M.D.* *Aaron B. Lerner, M.D.* *George F. Odland, M.D.* *Robert G. Parker, M.D.* *Orliss Wildermuth, M.D.*

The second course is on psychiatry for practitioners. Registration is limited to a small number and the course will be given in the University Hospital as follows:

Monday, July 22, 1963

9:00-10:00	The Psychosomatic Examination	*Thomas H. Holmes, M.D.*
10:30-12:15	Clinic at University Hospital	*Thomas H. Holmes, M.D.*
2:00- 5:00	Discussion of Psychiatric Inpatient Problems with Case Presentations. Veterans Administration Hospital	*Merlin H. Johnson, M.D. and Staff*

"This book is a joy to read. It might be compared to spending an evening with two experienced gynecologists who are willing and ready to give you all the practical hints that they have gleaned over a long experience in gynecologic practice . . ."

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PITFALLS in GYNECOLOGIC DIAGNOSIS and SURGERY

By Walter J. Reich, M.D. and Mitchell J. Nechtow, M.D.

248 pp.
5⅝x8⅜. 42 illus.
$10.95

Ways to avoid problems and complications in gynecologic diagnosis are outlined in this highly practical book. The authors emphasize procedures for making the correct diagnosis and, once the diagnosis is made, ways to avoid complications in treatment. They cover such topics as preoperative management, wound closure and postoperative management, the role of anesthesia in gynecologic surgery, and the diagnosis and management of bacterial shock in gynecologic surgery. The chapter on ligation of the hypogastric arteries is of special interest.

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Tuesday, July 23, 1963

9:00-10:00	Doctor-Patient Relationship	*Neal E. Ely, M.D.*
10:30-12:30	Seminar	*Neal E. Ely, M.D.*
1:30- 2:30	Human Ecology and Disease	*Thomas H. Holmes, M.D.*
3:00- 5:00	Seminar	*Thomas H. Holmes, M.D.*

Wednesday, July 24, 1963

9:00-10:00	Psychotherapy	*Franklin M. Draper, M.D.*
10:00-10:45	Discussion of Psychotherapy	*Franklin M. Draper, M.D.*
11:15-12:15	Physical and Pharmacologic Therapy	*Merlin H. Johnson, M.D.*
12:15- 1:00	Discussion of Physical and Pharmacologic Therapy in Psychiatry	*Merlin H. Johnson, M.D.*
2:00- 5:00	Patient Care	*Thomas H. Holmes, M.D.*

Further information may be obtained from Mrs. Alice Steen, Room C304, Health Sciences Building.

OBITUARIES

DR. HOWARD L. BOTTS, *73, died March 18 of carcinoma prostate, uremia and myocardial infarction. He obtained his medical degree from Northwestern University Medical School, Chicago, in 1921. Dr. Botts interned at the old Seattle City Hospital, and moved to Black Diamond in 1922. He practiced there for 42 years.*

DR. JOSEPH H. WHATMORE, *49, of Seattle, died suddenly at his home on March 18 of intracerebellar hemorrhage. He was a native of Seattle where he received his premedical education. His medical degree was granted by Harvard Medical School in 1941. He was a flight surgeon in World War II and had practiced in Seattle following his discharge from active duty.*

DR. OLIVER J. MOREHEAD, *81, of Spokane, died March 28 of myocardial infarction. He attended University of Minnesota Medical School, Minneapolis, where he received his degree in 1925.*

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DOSAGE: **Oral**—Usual adult dose in mild to moderate anxiety and tension is 5 or 10 mg, 3 or 4 times daily; in severe anxiety and tension, 20 or 25 mg, 3 or 4 times daily. **Parenteral**—To control acute conditions, the usual initial adult dose is 50 to 100 mg I.M. or I.V.; not more than 300 mg should be given during a 6-hour period. ☐ SIDE EFFECTS: **Oral**—Drowsiness and ataxia, usually dose-related, have been reported in some patients—particularly the elderly and debilitated. Paradoxical reactions, i.e., excitement, stimulation, elevation of affect and acute rage, have been reported in psychiatric patients; these reactions may be secondary to relief of anxiety and should be watched for in the early stages of therapy. Other infrequent dose-related side effects have included isolated instances of minor skin rashes, minor menstrual irregularities, nausea, constipation, increased and decreased libido. **Parenteral**—Following parenteral administration some patients may become drowsy or unsteady. The injectable form has occasionally produced mild, transitory fluctuations of blood pressure. ☐ PRECAUTIONS: **Oral**—In elderly, debilitated patients, limit dosage to smallest effective amount to preclude development of ataxia or oversedation (not more than 10 mg per day initially, to be increased gradually as needed and tolerated). Until the correct maintenance dosage is established, patients receiving this agent should be advised against possibly hazardous procedures requiring complete mental alertness or physical coordination. Although this agent is a valuable aid in acute and chronic alcoholism, caution patients about possible combined effects with alcohol. Caution should be exercised in administering it to addiction-prone individuals. Careful consideration should be given to the pharmacology of any agents to be employed with Librium (chlordiazepoxide HCl)—particularly the MAO inhibitors and phenothiazines. Observe usual precautions in impaired renal or hepatic function. Periodic blood counts and liver function tests may be advisable in protracted treatment. **Parenteral**—Parenteral administration is indicated primarily in acute states, and patients receiving this form of therapy should be kept under observation, preferably in bed, for a period of up to three hours. Ambulatory patients should not be permitted to operate a vehicle following injection. The usual precautions of reduced dosage should be observed when treating patients with impaired renal or hepatic function. The injectable form should not be given to patients in shock or comatose states. Reduced dosage (usually 25 to 50 mg) should be used for elderly or debilitated patients, and for children.

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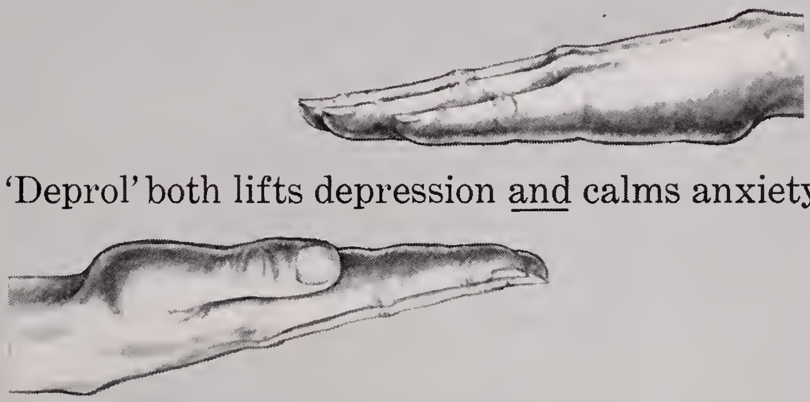

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EXECUTIVE SECRETARY *Mr. A. L. Bird, Boise*
annual meeting June 26-29, 1963, Sun Valley

Radiological society

Robert A. Butz, Idaho Falls, President of the Idaho State Radiological Society, reports the annual meeting of the society was held in Boise on Saturday, June 8, 1963. Guest speaker for the society's meeting was Orliss Wildermuth, The Tumor Institute, Swedish Hospital, Seattle.

Medical education forum

The Western Forum on Medical Education, sponsored by the Western Interstate Commission for Higher Education (WICHE) was held at the Sir Francis Drake Hotel, San Francisco, May 19, 20, 21, 1963. It was attended by President Manley B. Shaw, Secretary-Treasurer A. Curtis Jones, Robert S. McKean, Chairman of the association's Medical Education Committee and Executive Secretary Bird. Others who attended the three-day conference are Alfred M. Popma, a member of the Idaho WICHE Commissioners, and S. M. Poindexter, Chairman of the State Board of Medicine.

Service bureau board meets

A meeting of the members of the Board of Directors of the South Idaho Medical Service Bureau, Inc., called by Joseph M. Thomas, Boise, President, was held at the Owyhee Hotel in Boise on Saturday, May 11, 1963, beginning at 10 a.m. Many important items were up for consideration and action.

Members of the Board of Directors and the Councilor Districts or Component Societies they represent are:

S. D. Simpson, Caldwell, Southwestern Idaho District Medical Society; Russell Tigert, Jr., Soda Springs, Bear River Valley Medical Society; Reuben C. Matson, Jerome, Councilor District No. 3; Fred E. Wallber, Idaho Falls, Idaho Falls Medical Society; Dean H. Mahoney, Burley, South Central Idaho District Medical Society; William D. Forney, Boise, Councilor District No. 2; Joseph M. Thomas, Boise, Ada County Medical Society; Olif D. Hoffman, Rexburg, Upper Snake River Valley Medical Society; Lloyd S. Call, Pocatello, Southeastern Idaho District Medical Society; and Corwin E. Groom, Pocatello, Councilor District No. 4. Representing the Idaho State Medical Association were Manley B. Shaw, A. Curtis Jones and Quentin W. Mack, all of Boise.

Blue Cross

The new President of the Idaho Blue Cross organization, elected at a recent meeting, is Mr. John W. Hayman, Caldwell, Administrator of the Caldwell Memorial Hospital. He succeeds Mr. A. A. Walther, Boise, who served as President of the organization for the past four years.

Physician members of the Board of Directors are: W. P. Marineau, Moscow; S. C. Taylor, Nampa; Maurice K. Heninger, Idaho Falls, and C. Clifford Johnson, Boise. Mr. Leonard O. Thompson is Executive Director of the program.

Tuberculosis association

James R. Kircher, Burley, who has served as President of the Idaho Tuberculosis Association for the past two years, was succeeded by Mr. Rulon Dunn of Preston, during a recent meeting of the association in Boise.

State Board of Medicine Section

One Temporary License was granted during April.

Walter F. Loomis, Ogden. Graduate Temple University School of Medicine, 1942. Internship Salt Lake County General Hospital, 1942-43. Residency, same, 1943-44. Granted T-300 April 19. Industrial Medicine.

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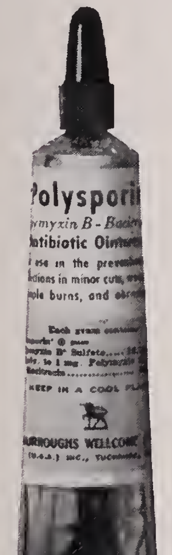

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B. Willder's Palsied Prose Now in Mass Production

By ROBERT L. DEAN, A. B.

Reprinted, by permission, from the *SK&F Psychiatric Reporter*, published by
Smith Kline and French Laboratories, Philadelphia

I spent last Wednesday morning inspecting the assembly line at Solecisms, Unlimited. The visit was an eye opener, for I had assumed that Dr. Willder's products for bad medical writing were all custom-made, laboratory-scale phrases and clauses.

"Not any more, my boy," he told me as we began our tour of the Solecisms plant. "Much of our palsied prose is now made in the semi-works; and more and more of it is going into full commercial-scale production as we convince medical writers to rely on stock phrases."

"How did you get started?" I asked.

"Our beginnings were humble, but they were auspicious and augured well for the ultimate acceptance of stock phrases," he answered. "We began simply, with our Letters-to-the-Editor assembly line. Here I'll show you."

We walked to a long moving belt attended by a half dozen girls dressed in white—and wearing surgical masks!

"To keep our prose products completely sterile!" he explained over the din of the machinery.

As we watched, the girls reached into bins and took out words and phrases which they attached to long awkward-looking sentences that were moving slowly by on the belt.

One girl did nothing but attach the word *interesting* to each long sentence that came by her; another kept snapping the phrase *poses more problems than it solves* onto the sentence; another bolted the clause *it calls to mind the case I reported some 20 years ago* to every sentence.

At the end of the line, tumbling into a waiting chute came sentence after sentence. I picked one up and read:

Dr. ————'s interesting article creates more heat than light and poses more problems than it solves; however, it calls to mind the case I reported some 20 years ago.

"Are they all alike?" I asked.

"This is the Letters-to-the-Editor sentence that comes off the line on Wednesdays. Now, on Thursdays, it's different. Let me see . . . that's when we produce quantities of *at the risk of being presumptuous . . .*"

"Do you supply stock phrases to the editors, too?" I asked.

"Oh, yes—for handling complaints, for example. Let's say a reader writes in and complains about the spelling of his name:

Dear Editor:
In your description of our community clinic you were kind enough to mention my name seven times, but each times you spelled it McCloud. I spell it McLeod.
Martin McLeod, M.D."

"Do you have a standard reply to handle that?" I asked, amazed.

"Certainly," Dr. Willder replied. "We just supply the editor with our *Oops!* letter:

Oops! we certainly goofed that time! But Mr. McCloud needn't worry. We'll watch it next time.

"Now let's look at the line where we assemble our stock sentences for paper discussants.

Here again a small group of girls was busy attaching words to a sentence moving on a belt. One girl methodically bolted *certainly to be congratulated on a worthwhile contribution*, another added *this fine and perceptive presentation*, a third added *privileged to have this opportunity and warrants further investigation.*

"That's Wednesday's production," Dr. Willder explained. Tomorrow, these girls will assemble Thursday's sentence:

Unfortunately I did not receive Dr. ———'s paper until this morning, and so I would like to show you some of the results of my own work; first slide, please!"

"Why, I've read and heard those sentences so many times!" I exclaimed. "But I had no idea you were mass-producing them."

"That's nothing, my boy," he said. "Those are just introductory sentences. Come, I want you to see our biggest assembly line." He took me into a long narrow room where at least a hundred men and women, all dressed in white, were attending a block-long moving belt. We edged up close; along the belt hundreds of words were moving slowly by as the workers added phrases and whole sentences. The girl on my right mechanically added *more effective liaison must be developed;* the girl on my left added *new avenues must be explored;* the man on the opposite side of the belt, facing us, added *constructive thinking should be encouraged.*

"What are they assembling?" I asked, puzzled.

"The All-Purpose Psychiatric Speech," Dr. Willder shouted. "Let's follow it along the line and you'll see how it's assembled. See; look at the labels on the bins. These are indispensable phrases in today's armamentarium for mental health talks:

on the threshold of exciting changes
mental illness is like any other illness
mental illness is not *like any other illness*
at the crossroads
formulate a definitive program

I noticed one of the masked workers was pouring some viscous words from a huge bottle labeled, "Bromides." Another was reaching into a bin and taking out what looked very much like old saws, which she inserted here and there into the sentences passing by. One of the men was adding a few old chestnuts at intervals. And at the end of the line a man was spraying the finished sentences as they came off the belt. "He's watering everything down," Dr. Willder explained.

"Amazing!" I said as we walked away. "But tell me, Dr. Willder, have you been able to sell any stock phrases to the pharmaceutical companies?"

"Sh!" he said, seemingly alarmed. "They are among our best customers, but they prefer not to publicize the fact. See that small group of workers over there? They're working on *virtually unique* I believe; yes, that's Wednesday's product."

Sure enough, *virtually unique* was lumbering along on the belt attached loosely to *virtually never* and *rarely if ever.* Immediately, one of the workers attached *comparatively high* to it; another snapped on *relatively low;* another, *better tolerated* and *acts faster.* Beside each worker were drums containing a supply of *clincally proven, outstanding,* and *a wide range of usefulness.* Overhead were racks with a supply of *especially designed balanced formula,* and *the result of painstaking research.* The workers' hands moved quickly from bin to belt, adding a cliché here, some jargon there.

"Well, what do you think of our plant?" Dr. Willder asked as we returned to his quiet office.

"I cannot help being impressed by your rigid quality control," I said, playing it safe. "And, of course, your modern, up-to-date facilities for producing thoroughly sterile standardized prose."

"So glad you like it!" he beamed, just as though I'd said I did.

BOOKS

RECEIVED: The following books have been received. Publication of this acknowledgement is to be considered adequate return to the sender. Selected titles will be reviewed as space permits.

The story of blood. By Kenneth Walker, M.A., M.B., B.Ch., F.R.C.S., F.I.C.S. 213 pp. Price $6.00. Philosophical Library, New York. 1963

Internal medicine in World War II. Prepared and published under the direction of Lieutenant General Leonard D. Heaton, The Surgeon General, United States Army. Editor in Chief, Colonel John Boyd Coates, Jr., MC, USA. Editor for Internal Medicine, W. Paul Havens, Jr., M.D. 649 pp. Illustrated. Price $6.75. Department of the Army, Washington, D.C. 1963.

The biochemistry of bladder cancer. By Eric Boyland, D.Sc (Manchester), Ph.D. (London), Professor of Biochemistry in the University of London. Edited by David A. Karnofsky, M.D., Associate Professor of Medicine, Cornell University Medical College, New York. 95 pp. Drawings. Price $5.75. Charles C Thomas, Springfield. 1963.

Antibody to enzymes—a three-component system. Consulting Editor, B. Cinader, Editor, Harold E. Whipple, Managing Editor, Stanley Silverzweig. 1154 pp. Illustrated. Price $8.00. New York Academy of Sciences, New York. 1963.

Thyrotropin. Compiled and Edited by Sidney C. Werner, M.D., D.Sc.(Med.), Columbia University College of Physicians and Surgeons, Presbyterian Hospital, New York, 32 contributors. Graphs. 392 pp. Price $11.75. Charles C Thomas, Springfield. 1963.

Poison detection in human organs. By Alan S. Curry, M.A., Ph.D., F.R.I.C., Principal Scientific Officer at the Home Office, Forensic Science Laboratory, Harrogate, Scholar of Trinity College, Cambridge. 150 pp. Price $6.75. Charles C Thomas, Springfield, 1963.

Clinical dental hygiene. By Shailer Peterson, B.A., M.A., Ph.D., F.A.C.D. (Hon.), F.I.C.D. (Hon.), Dean and Professor of General Dentistry, University of Tennessee College of Dentistry, Memphis, Tennessee. 356 pp. Illustrated. Price $7.00. The C. V. Mosby Company, St. Louis 3. 1963.

The nurse and her problem patients. By Gertrud Bertrand Ujhely, R.N., M.A., Assistant Professor of Nursing, Rutgers, the State University of New Jersey. 180 pp. Price $2.85. Springer Publishing Company, Inc., New York. 1963.

Clinical gastroenterology. By Eddy D. Palmer, M.S., M.D., F.A.C.P., Colonel, Medical Corps, United States Army, Consultant in Gastroenterology to the Surgeon General, Chief of the Department of Medicine, Brooke General Hospital, Fort Sam Houston, Texas. 706 pp. Illustrated. Price $22.50. Hoeber Medical Division, Harper & Row, New York. 1963.

Tumors of the chest. By Thomas J. Kinsella, M.D., Clinical Professor of Surgery, University of Minnesota. 145 pp. Illustrated. Price $9.50. Charles C Thomas, Springfield, 1963.

Cardiomechanics. By Spyridon D. Moulopoulos, M.D., Associate Professor (Docent), School of Medicine, University of Athens, Greece. 193 pp. Illustrated. Price $7.75. Charles C Thomas, Springfield. 1963.

Classics in neurology. Selected by Richard Sherman Lyman, M.D., formerly Professor of Neuropsychiatry, Duke University Medical School. Edited by H. S. Burr, and E. K. Hunt, Professor of Anatomy, Emeritus, Yale University School of Medicine. 176 pp. Price $6.50. Charles C Thomas, Springfield. 1963.

Keys to successful surgery. By Robert Tauber, M.D., F.A.C.S., Associate Professor of Gynecology, Graduate School of Medicine, University of Pennsylvania. 547 pp. Illustrated. Price $15.00. Frederick Ungar Publishing Company, New York. 1963.

Pleural effusion. By Stephan Sulavik, M.D., Clinical Instructor in Medicine, Yale University School of Medicine; and Sol Katz, M.D., Chief, Medical Service, Mt. Alto Veterans Administrative Hospital. 90 pp. Price $5.00. Charles C Thomas, Springfield. 1963.

The risk takers. By Hugh McLeave. 208 pp. Illustrated. Price $4.50. Holt, Rinehart and Winston, Inc., New York. 1963.

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*U.S. Department of Health, Education and Welfare, Public Health Service Publication No. 813.

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Meetings OF MEDICAL SOCIETIES

AMA Annual—Atlantic City, June 16-20, 1963; San Francisco, June, 21-25, 1964, New York, June 20-24, 1965.

AMA Clinical—Portland, Dec. 1-4, 1963; Miami Beach, Nov. 29-Dec. 2, 1964.

Idaho State Medical Association—June 26-29, 1963, Sun Valley.

Northwest Soc. for Clin. Research—Jan. 10-11, 1964, Vancouver, B. C.
Pres., Denys K. Ford, Vancouver
Sec., R. E. Beck, Vancouver

Oregon State Medical Society—Sept. 25-28, 1963, Portland.

Washington State Medical Association—Sept. 15-18, 1963, Seattle.

West Coast Allergy Society, Dec. 5-7, 1963, Las Vegas, Nevada
Pres., M. Coleman Harris, San Francisco
Sec., James E. Stroh, Seattle

OREGON

Ore. Acad. Ophth. & Otolar.—Portland Aero Club, 4th Tue., Sept.-May.
Pres., M. Harvey Johnson, Portland
Sect., D. W. McDaniel, The Dalles

Oregon Dermatologic Society—Portland 2nd Wednesday (Nov., Jan.-Apr.)
Pres., Sheldon Walker, Portland
Sec., F. A. J. Kingery, Portland

Oregon Pathologists Association—Portland, 2nd Wednesday (Feb., Apr., Oct., Dec.)
Pres., Terence Cochran, Portland
Sec., K. D. McMilan, Eugene

Oregon Radiological Society—University Club, Portland, 2nd Wednesday through school year
Pres., L A. Gay, The Dalles
Sec., G. R. Satterwhite, Portland

Ore. Soc. Obst. & Gynec.—Portland, Park Heathman, 3rd Fri. (Oct., Nov., Jan., May)
Pres., W. L. Hartmann, Portland
Sec., T. A. Treanor, Portland

Oregon State Society of Anesthesiologists—Portland. 3rd Friday (except June, July, Aug.)
Pres., J. A. Siebs, Eugene
Sec., P. E. Schaff, Portland

Oregon Urological Society—Quarterly Meetings, University Club, Portland
Pres., T. A. Davis, Portland
Sec., G. W. Schwiebinger, Portland

Portland Academy of Hypnosis — 3rd Monday (Sept.-May) Aero Club
Pres., V. P. Shoemaker
Sec., M. S. Skiff

Portland Academy of Pediatrics—1st Monday
Pres., W. M. Clark, Jr.
Sec., J. W. Bussman

Portland Surgical Society—last Tuesday (Sept.-May), UOMS Library
Pres., H. Minor Nichols
Sec., H. W. Baker

WASHINGTON

Puget Sd. Acad. Ophth. & Oto.—3rd Tues. (Oct.-May) Seattle or Tacoma. Annual—Seattle, Jan. 17, 18, 1964.
Pres., H. L. Maier, Tacoma
Sec., D. F. Milam, Jr., Bellevue

Seattle Academy of Surgery—3rd Wed. bi-monthly; Seattle Yacht Club.
Pres., E. B. Parmelee
Sec., W. S. Brown

Seattle Gyn. Soc.—3rd Wed. exc. June, Aug., Dec., Feb.
Pres., D. M. McIntyre, Seattle
Sect., E. T. MacCamy, Seattle

Seattle Pediatric Society—3rd Friday (Sept.-May), College Club
E. J. Wollenweber, Seattle
A. L. Skinner, Seattle

Seattle Surg. So.—4th Mon. (Sep.-June) Annual—Seattle, Jan. 24-25, 1964.
Pres., Eric Sanderson, Seattle
Sec., R. C. Coe, Seattle

Spokane Society of Internal Medicine—Quarterly, Rockwood Clinic
Pres., Robert Berghan
Sec., Richard E. Steury

Tacoma Academy of Internal Medicine—4th Tuesday (Sept.-May)
Pres., R. A. Kallsen
Sec., R. A. O'Connell

Tacoma Surgical Club—May 2, 1964, 3rd Tuesday (Sept.-May)
Pres., Dumont Staatz
Sec., Robert B. Burt

Washington Academy of Clinical Hypnosis—3rd Friday (Sept.-June)
Pres., Tom Wall, D.M.D., Seattle
Sec., John E. Nelson, Seattle

Washington State Obstetrical Associa- October 12, 1963, Yakima.
Pres., R. K. Plant, Seattle
Sec., F. LeCocq, Yakima

Washington State Radiological Society—Seattle, 4th Mon., (Sept.-Apr.) Business Session, Meany Hotel, Scientific Sn. UWSM X-ray Dept.
Pres., W. A. Chesledon, Seattle
Sec., R. H. Rosenberg, Seattle

Wash. St. Soc. of Anesthesiologists
Pres., M. W. Bulmer, Wenatchee
Sec., Robt. M. Kintner, Wenatchee

Washington State Society of Internal Medicine—Sept. 18, 1963
Pres., D. M. Ulrich, Seattle
Sec., J. H. Lindberg, Seattle.

Yakima Obstetrical and Gynecological Society—Last Monday (except July, Aug., Dec.)
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Yakima Surgical Society—Last Thursday (Sept.-May)
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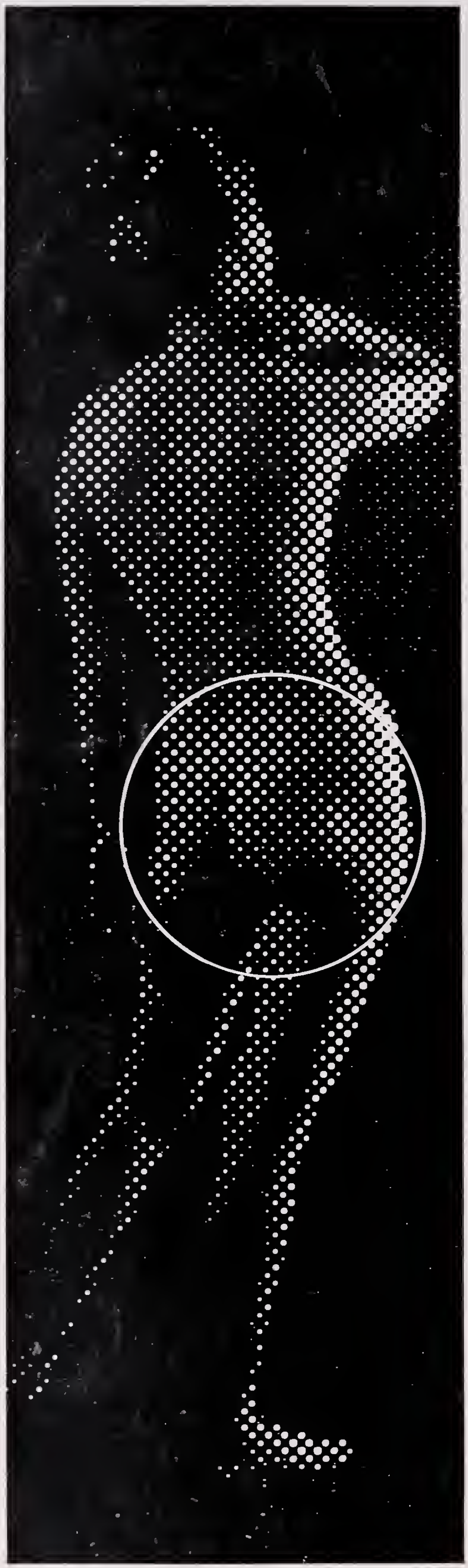

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① Provides balanced nutritional values.

② An excellent formula for regular infant feeding.

③ An ideal food for milk allergies, eczema and problem feeding.

SOYALAC helps solve the feeding problem of prematures and infants requiring milk-free diet.

Strikingly similar to mother's milk in composition and ease of assimilation, babies thrive on SOYALAC.

Clinical data furnish evidence of SOYALAC'S value in promoting growth and development.

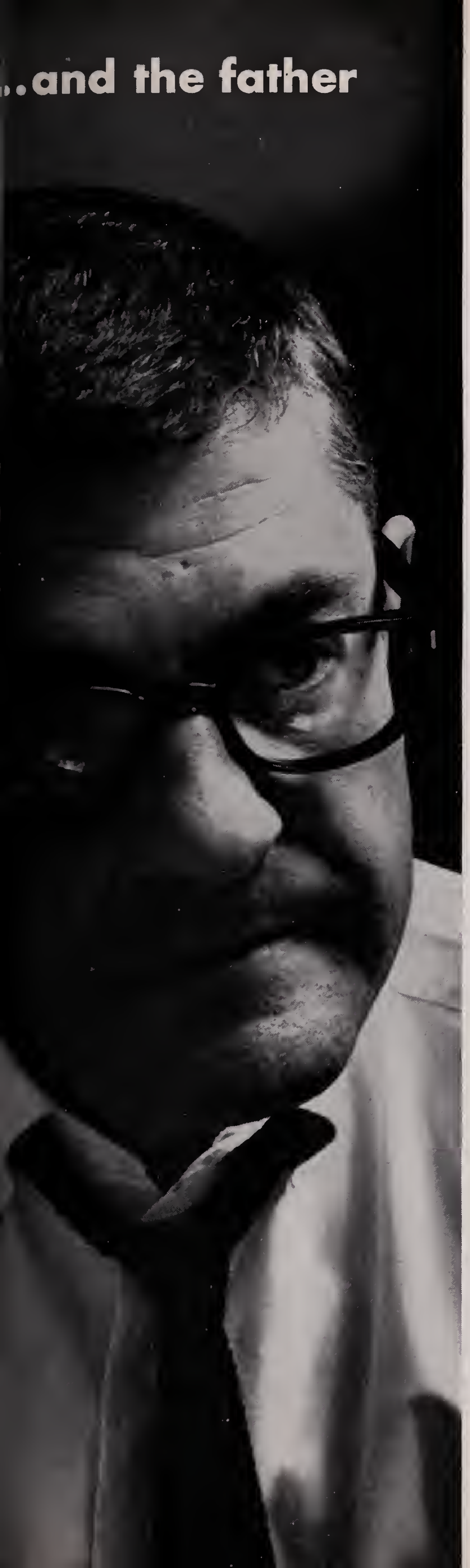
Protein of high biologic value is obtained from the soybean by an exclusive process.

Free Booklet and Samples

A request on your professional letterhead or prescription form will bring to you complete information, and a supply of samples.

Medical Products Division
LOMA LINDA FOOD COMPANY
ARLINGTON, CALIFORNIA • MT. VERNON, OHIO

the destructive child...



both victims of "communicable"* ANXIETY

both responsive to

ATARAX®
(brand of hydroxyzine HCl)

widely favored for the disturbed child

ATARAX syrup

because of its efficacy, outstanding record of safety...and its excellent flavor which makes administration a pleasure instead of a project

equally effective for grownups

ATARAX tablets

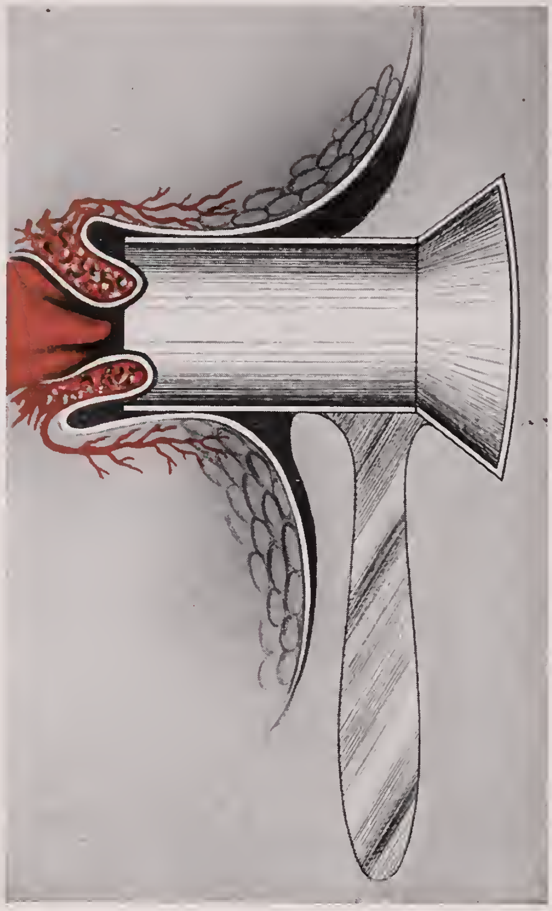
and equally well tolerated by patients of any age...no dulling of mental acuity to interfere with normal activities of busy adults

FOR COMPLETE PRESCRIPTION INFORMATION, CONSULT PRODUCT BROCHURE

*Literally, of course, anxiety is not "communicable" as the word is commonly used, but you probably see many patients whose emotional disturbances are transmitted to and reflected in the people who are closest to them.

For a high potency vitamin B complex formula with C, recommend **ASF®** (Anti-Stress Formula).

ROERIG Rx
New York, N.Y., Division, Chas. Pfizer & Co., Inc.
Science for the World's Well-Being®



pain
swelling
infection
of hemorrhoids

effectively relieved

with new formula

PNS®

suppositories

Each suppository contains:

Pontocaine® (brand of tetracaine) HCl	10 mg.
Neo-Synephrine® (brand of phenylephrine) HCl	5 mg.
Neomycin (as neomycin sulfate)	5 mg.
Superinone® (brand of tyloxapol)	25 mg.
Bismuth subcarbonate	100 mg.
Sodium propionate	100 mg.

Suppository base contains fractionated coconut oil.

PNS Suppositories contain Pontocaine (tetracaine – Winthrop) for long-acting, nonirritating anesthesia, Neo-Synephrine (phenylephrine – Winthrop) for dependable decongestion, neomycin for broad-spectrum anti-infective action and Superinone (tyloxapol – Winthrop) for its spreading effect.

Tolerance: PNS Suppositories are generally very well tolerated. Slight burning, lasting a minute or two, has occurred in a few instances. However, should evidence of sensitivity appear, use of the suppository should be discontinued.

Directions: Insert 1 suppository rectally after each bowel movement and on retiring.

How Supplied: Boxes of 12.

Winthrop

Winthrop Laboratories
New York, N. Y.

1814M

CORRESPONDENCE

Washington Academy of GP

EDITOR, NORTHWEST MEDICINE:

At the recent annual meeting of the Washington Academy of General Practice held in Wenatchee, Duncan Robertson, M.D., of Seattle was elected president, Richard A. Stiles, M.D., of Yakima was elected president-elect, Charles S. Strong, M.D., of Vancouver was elected vice-president. John E. Gahringer, Jr., M.D., is secretary-treasurer (2 year term).

The next annual scientific session will be held May 14-15-16, 1964, in Tacoma and Hotel Headquarters will be the Winthrop Hotel. Robert C. Johnson, M.D., 1206 S. 11th, Tacoma 5, will chairman the annual meeting.

The Washington Academy of General Practice will again award two prizes of $200 each to a member of the WAGP who is judged to have the best scientific exhibit at the meeting and is judged to have the best scientific paper published in a national or state medical journal during the year. Additional details may be obtained by writing to me.

Yours sincerely,
WALTER A. LAPSLEY,
Executive Secretary,
Washington Acedemy of General Practice,
10003 S. E. Evergreen Highway,
Vancouver, Washington

Cigarette Advertising

EDITOR, NORTHWEST MEDICINE:

I note in the May issue of NORTHWEST MEDICINE, a full page ad featuring Tareyton cigarettes.

It would seem to me that the evidence indicating cigarette smoking as *one of the principal* causes of lung cancer is now so overwhelming that "even doctors" would agree the filthy habit of cigarette smoking should be discouraged with all the energy and resources at the command of the medical community, rather than actually allowing such to be advertised in one of our journals.

In addition to the five-billion-dollar burden in direct purchases of tobacco products, twenty five to thirty thousand lives could be saved every year, if this habit were removed from the lives of the American people.

I'd like to suggest that if the income received by printing the misleading information that goes to make up this and other "ads" is necessary to NORTHWEST MEDICINE, then in the interest of good health for our nation, each of us should contribute enough to the budget to equal the "loss" incurred by refusal to carry advertisements of tobacco, liquor, and other narcotics or poisons, too expensive and dangerous to be recommended for human consumption.

Sincerely yours,
M. J. SHARP, M.D.
Fifth Avenue at Center,
Pocatello, Idaho

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MEDICAL TREATMENT FOR ALCOHOLISM

A member of the American Hospital Association and approved by the American Medical Association. Devoted exclusively to providing medical and psychiatric care for alcoholics and medical research in the field of alcoholism.

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Tension?
Hypertension?
Control both with Serpasil®
(reserpine CIBA)

Patients with high blood pressure plus one or more symptoms of tension—restlessness, rapid heart rate, excessive sweating, agitation—benefit from the distinctive calming action of Serpasil (reserpine). It shields the tense hypertensive patient from nervousness that raises his blood pressure. Result: pressure goes down, heart rate decreases. Useful in all grades of hypertension, either alone or as a background agent.

Average Dosage: 0.25 to 0.5 mg. daily.

Side Effects: Occasional: lassitude, drowsiness, nasal congestion, looseness of stools, increased frequency of defecation. Rare: anorexia, headache, bizarre dreams, nausea, dizziness. Nasal congestion and increased tracheobronchial secretions may occur in babies of mothers treated with reserpine.

Cautions: Severe mental depression has appeared in a small percentage of patients, primarily in a dosage above 1 mg. daily. Usually the patient had a pre-existing, incipient, endogenous depression which was unmasked or accentuated by reserpine. When the drug is discontinued, depression usually disappears, but hospitalization and shock therapy are sometimes required. Daily dosage above 0.25 mg. is contraindicated in patients with a history of mental depression or peptic ulcer. Withdraw Serpasil (reserpine) 2 weeks before surgery, if possible. For emergency surgical procedures, vagal blocking agents should be given parenterally to prevent or reverse hypotension and/or bradycardia.

Supplied: Tablets, 0.1 mg., 0.25 mg. and 1 mg.

2/3105MB

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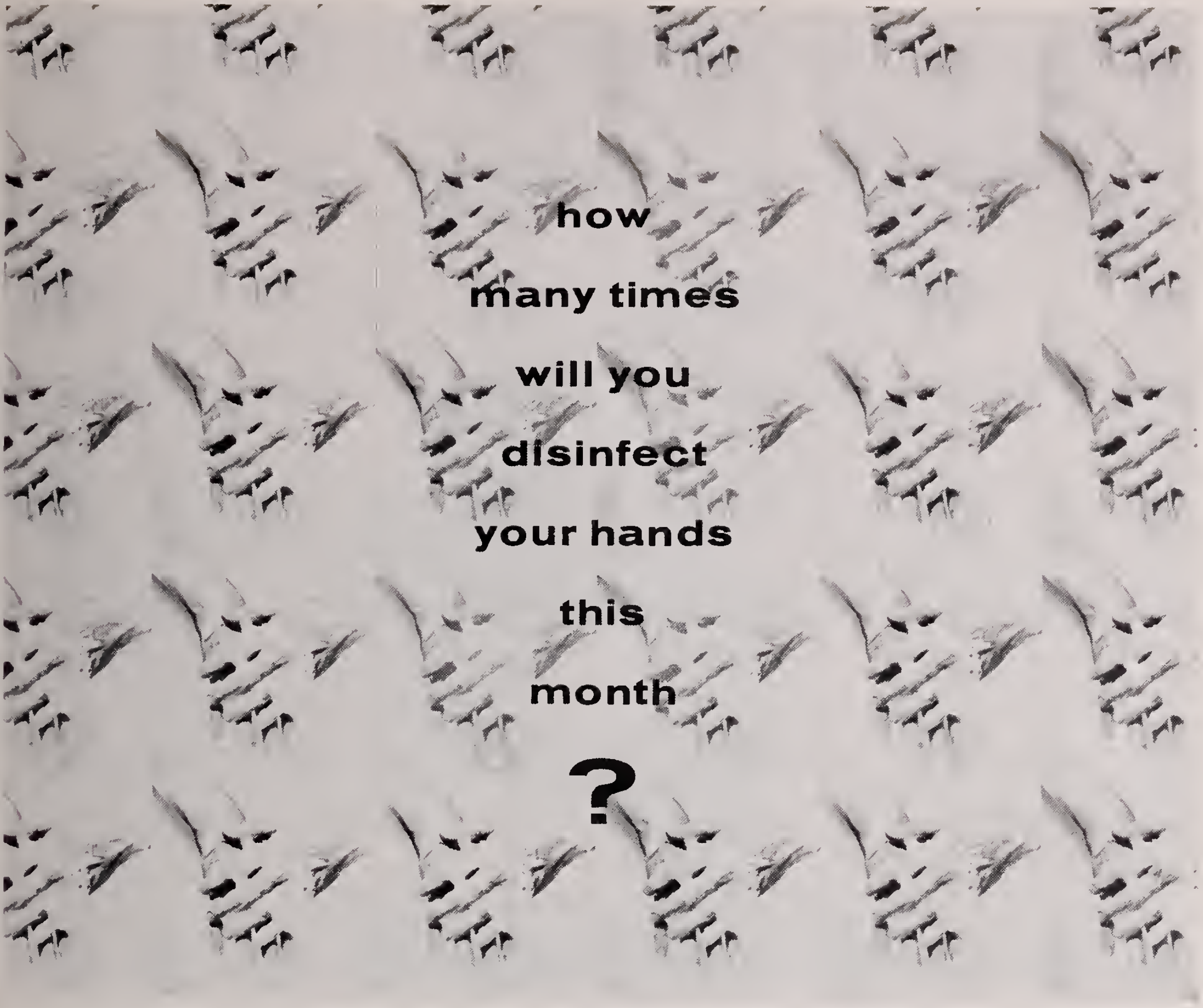
SUMMIT, N.J.



200? 300? 400? Hexaphene is formulated for frequent and effective*, anti-bacterial detergent cleansing with a minimum of skin drying or irritation. Excellent for presurgical, post-operative, and general hospital use. It is indicated in the treatment of skin infections, burns, diaper rash and cradle cap. 16 oz. and 1 gallon plastic dispensers.

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HEXAPHENE

skin cleanser with 3% Hexachlorophene suds better...is kinder to your hands!

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*Bacteriological tests using a 2-fold agar serial dilution technique demonstrated a complete inhibition of *Staphylococcus aureus* at a product dilution of 1-32,000.

an easier way?

'METHEDRINE'® brand
METHAMPHETAMINE HYDROCHLORIDE

is an easier way to help control food craving & keep the reducer happy

With "hunger pains" abolished, the patient can shrug off the chains of psychogenic craving that bind him to his habit of overeating and cooperate cheerfully with the prescribed diet.

In obesity, "...our drug of choice has been methedrine (methamphetamine hydrochloride)...because it produces the same central effect with about one-half the dose required with plain amphetamine, because the effect is more prolonged, and because undesirable peripheral effects are significantly minimized or entirely absent." Douglas, H. S.: West. J. Surg. **59**:238 (May) 1951.

Description: Each scored tablet contains 5 mg. 'Methedrine' brand Methamphetamine Hydrochloride.

Dosage: 2.5 mg. (½ tablet) 3 times daily. May be increased gradually according to response; more than 10 mg. daily rarely is needed. The last dose of the day should not be taken later than 6 hours before bedtime.

Side effects: Insomnia may occur if taken later than 6 hours before retiring. The usual peripheral actions of sympathomimetic amines (vasoconstriction and acceleration of the heart) are minimal and little noticed on low or moderate dosage.

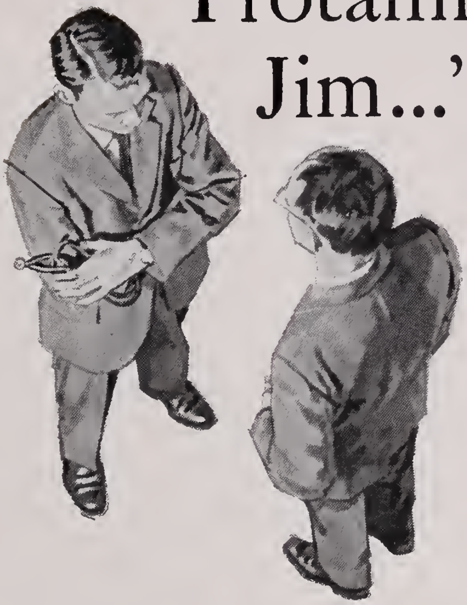
Contraindications and precautions: Should not be used in patients with myocardial degeneration, coronary disease, marked hypertension, hyperthyroidism, insomnia or a sensitivity to ephedrine-like drugs. Moderate hypertension in the obese is not necessarily a contraindication since it may be relieved as the overweight is reduced.

Supplied: Tablets 5 mg., scored, in bottles of 100 and 1000.

Complete literature available on request from Professional Services Dept. PML.

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.

“Sounds like
a case for
Protamide,
Jim...”



Just a few words from one physician to another and yet thousands of patients with the pain of neuritis or herpes zoster have been helped to fast relief and speedier recovery by this helpful suggestion.

Relief of inflammatory radicular pain, including herpes zoster, is prompt when Protamide is administered early[1-4] in the course of the disease. More important, recovery usually follows in three to six days, with prompt response even in ophthalmic herpes zoster.[5]

REFERENCES: (1) Baker, A. G.: Penn. Med. J. *63*:697 (May) 1960. (2) Smith, R. T.: New York Med. (Aug. 20) 1952, pp. 16-19. (3) Smith, R. T.: Med. Clin. N. Amer. (Mar.) 1957. (4) Lehrer, H. W.; Lehrer, H. G., and Lehrer, D. R.: Northw. Med. (Nov.) 1955. (5) Sforzolini, G. S.: Arch. Ophthal. *62*:381 (Sept.) 1959.

PROTAMIDE® —colloidal solution of denatured proteolytic enzyme—not foreign protein therapy.

Dosage: 1 Ampul I.M. daily for 2 to 5 days; longer if pain persists. Caution: Avoid I.V. administration.

Boxes of 10 ampuls, 1.3 cc. each, for intramuscular injection.

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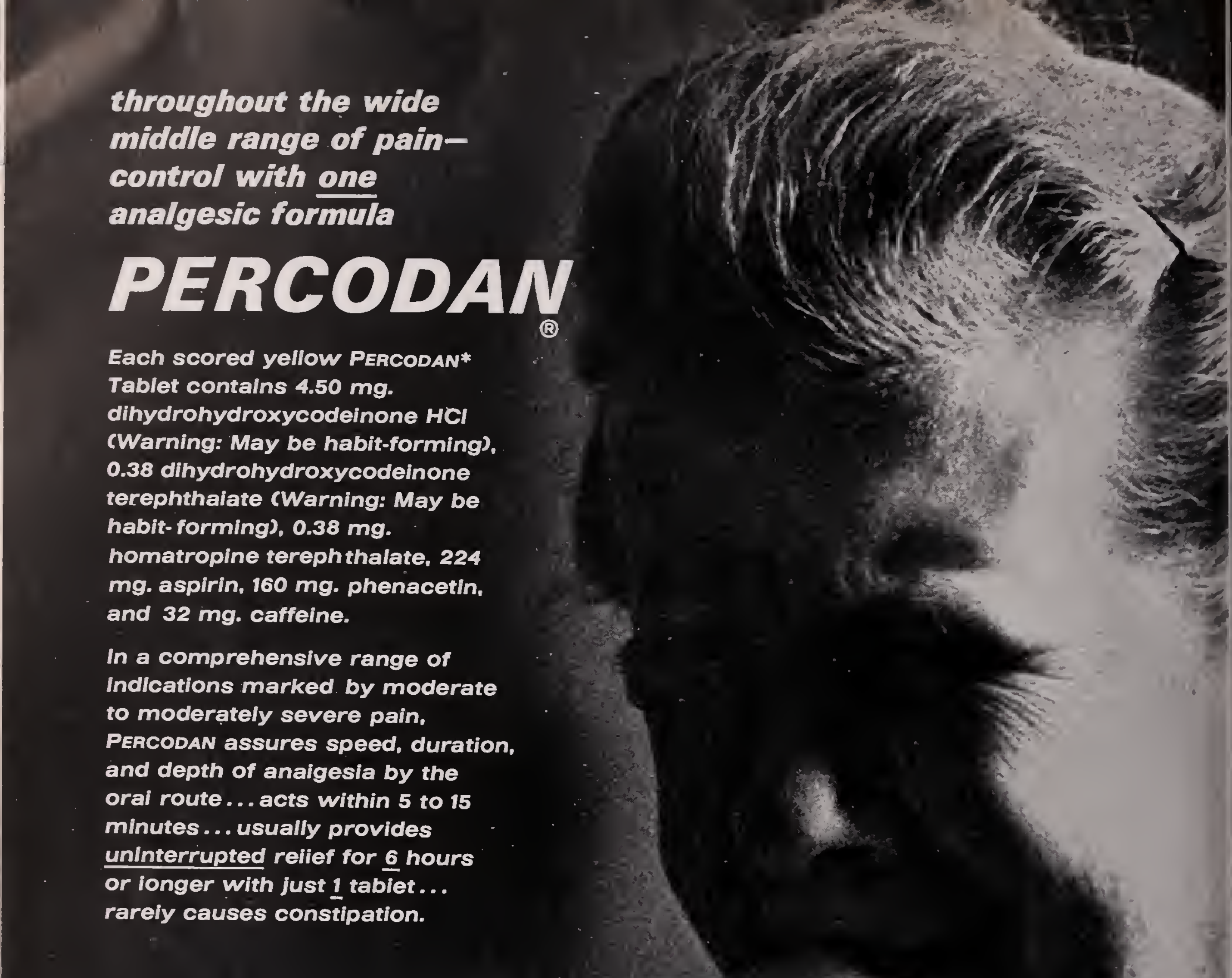

throughout the wide middle range of pain—control with one analgesic formula

PERCODAN®

Each scored yellow PERCODAN* Tablet contains 4.50 mg. dihydrohydroxycodeinone HCl (Warning: May be habit-forming), 0.38 dihydrohydroxycodeinone terephthalate (Warning: May be habit-forming), 0.38 mg. homatropine terephthalate, 224 mg. aspirin, 160 mg. phenacetin, and 32 mg. caffeine.

In a comprehensive range of indications marked by moderate to moderately severe pain, PERCODAN assures speed, duration, and depth of analgesia by the oral route . . . acts within 5 to 15 minutes . . . usually provides uninterrupted relief for 6 hours or longer with just 1 tablet . . . rarely causes constipation.

Average Adult Dose—1 tablet every 6 hours. **Side Effects and Contraindications**—Although generally well tolerated, PERCODAN may cause nausea, emesis, or constipation in some patients. PERCODAN should be used with caution in patients with known idiosyncrasies to aspirin or phenacetin, and in those with blood dyscrasias. **Also available:** PERCODAN®-DEMI, containing the complete PERCODAN formula but with only half the amount of salts of dihydrohydroxycodeinone and homatropine. Both products are on oral Rx in all states where laws permit. Narcotic order required. **Literature on request.** ENDO LABORATORIES Richmond Hill 18, New York

Endo®

*U. S. Pats. 2,628,185 and 2,907,768

HAXSEN

for relaxin'...

REDUCES ANXIETY TENSION

PROPERTIES: Haxsen combines muscle relaxant properties of mephenesin with sedative action of secobarbital sodium presenting a balanced, safe, prompt acting prescription.

Each Tablet Contains	
Mephenesin N.F.	6 grs.
Secobarbital Sodium U.S.P.	½ gr.

INDICATIONS: To relax the tense, anxious restless patient, so-called anxiety-tension state . . . gives pleasurable relaxation, tranquility.

SUPPLIED: Bottles of 100 and 1000 tablets.

DOSAGE: Usual adult dose: One tablet every four hours, after meals. Economical to use.

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Prescribe
Haxsen
With
Confidence

Lifts depression.

"I feel like my old self again!" Thanks to your balanced therapy with 'Deprol', her depression has lifted and her mood has brightened – while her anxiety and tension have been calmed. She sleeps better, eats better, and normal drive and interest have replaced her emotional fatigue.

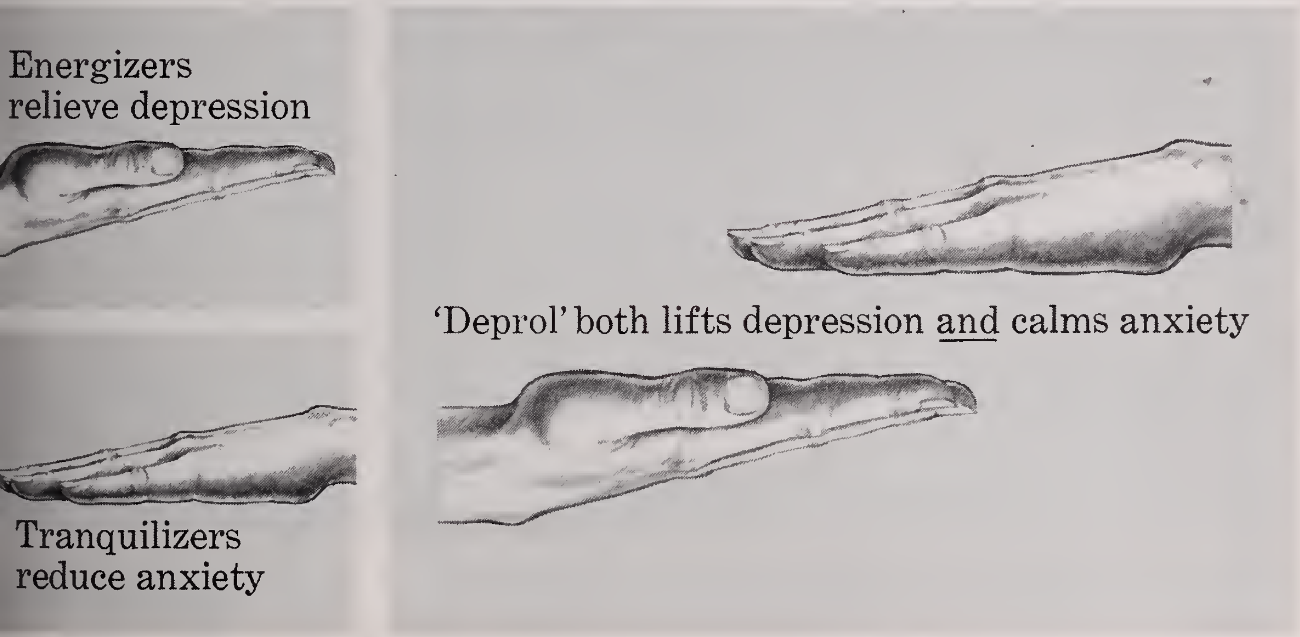
ıs it calms anxiety

3rightens mood...relaxes tension

ergizers may stimulate the depressed ient, but they often aggravate anxiety and mnia. Tranquilizers may help the anxious ient, but they often deepen depression and tional fatigue.

prol' avoids these "seesaw" effects; it re- es both depression and anxiety. Moreover, loes not cause liver damage, psychotic reac- ns or changes in sexual function.

Slight drowsiness and, rarely, allergic reactions, due to meprobamate, and occasional dizziness or feeling of depersonalization in higher dosage, due to benactyzine, may occur. Meprobamate may increase effects of excessive alcohol. Use with care in patients with suicidal tendencies. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction. Withdraw gradually after prolonged use at high dosage.

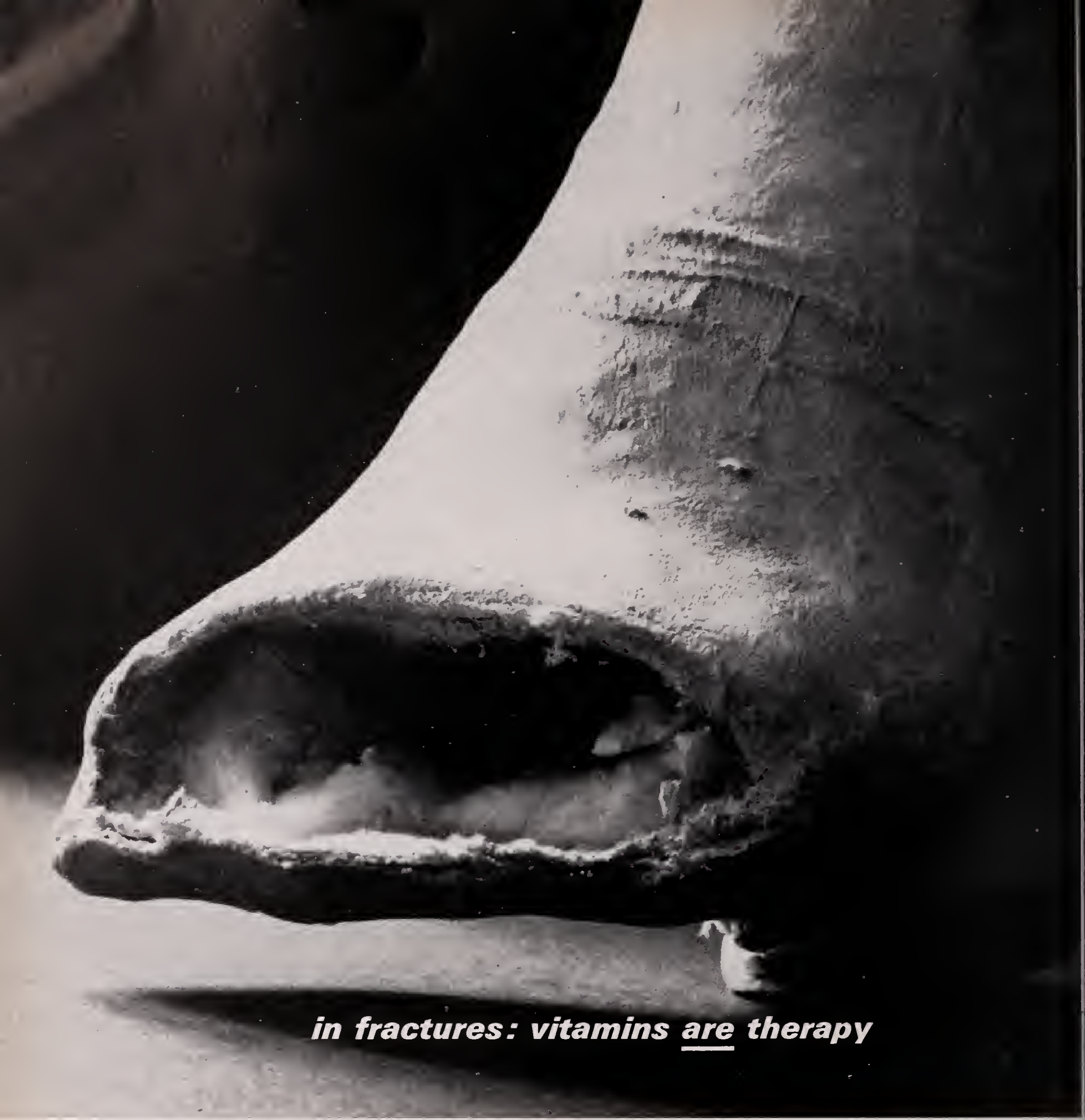

Energizers relieve depression
'Deprol' both lifts depression and calms anxiety
Tranquilizers reduce anxiety

ual Dosage: 1 tablet q.i.d. ay be increased gradually, as eded, to 3 tablets q.i.d.; with ablishment of relief, may be duced gradually to mainte- nce levels.

▲Deprol▲®

meprobamate 400 mg.
+ benactyzine 1 mg.

WALLACE LABORATORIES / *Cranbury, N.J.*



Few factors are more fundamental to tissue and bone healing than nutrition. Therapeutic allowances of B and C vitamins are important for rapid replenishment of vitamin reserves which may be depleted by the stress of fractures. Metabolic support with STRESSCAPS is a useful adjunct to an uneventful recovery.

FOR PROFESSIONAL
RECOMMENDATION ONLY

Each capsule contains: Vitamin B_1 (Thiamine Mononitrate)...10 mg. / Vitamin B_2 (Riboflavin)...10 mg. / Niacinamide... 100 mg. / Vitamin C (Ascorbic Acid)...300 mg. / Vitamin B_6 (Pyridoxine HCl)...2 mg. / Vitamin B_{12} Crystalline... 4 mcgm. / Calcium Pantothenate...20 mg. Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100.

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STRESSCAPS®

Stress Formula Vitamins Lederle

DE LUXE BARGAIN

200 feet Salt Waterfront with Super, All-Electric Modern Home and New Modern Guest House, just 24 miles driving from downtown Seattle.

An ideal 4½ Acres with Superb View, all utilities in.
In Point-No-Point, Hansville area.
Excellent Summer, Week-End or Year 'Round Home.

Extra Large Garage, Outdoor Picnic Patio with Fireplace,

Young, two year old Orchard, lots of Shrubs, Roses, Lilacs, etc., etc.

Perfect location for the Children or Grand Children with fine Sandy Beach.

Under $37,500

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ragweed,
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cocklebur,
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russian thistle,
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salt bush,
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whatever the hay fever comes from, symptoms go away quickly with Pyribenzamine
(tripelennamine hydrochloride)

Tablets, 50 mg. and 25 mg.

Lontabs® (long-acting tablets CIBA), 100 mg. and 50 mg.

Elixir, 30 mg. Pyribenzamine® citrate (tripelennamine citrate CIBA) per 4-ml. teaspoon (equivalent to 20 mg. tripelennamine hydrochloride).

Expectorant with Ephedrine, 30 mg. tripelennamine citrate, 10 mg. ephedrine sulfate, and 80 mg. ammonium chloride per 4-ml. teaspoon.

Expectorant with Codeine and Ephedrine, 30 mg. tripelennamine citrate, 8 mg. codeine phosphate, 10 mg. ephedrine sulfate, and 80 mg. ammonium chloride per 4-ml. teaspoon. Exempt narcotic.

Ointment, 2% (petrolatum base).

Cream, 2% (water-washable base).

Caution: Give hypnotics and sedatives cautiously with tripelennamine.

Side effects: Drowsiness, gastric discomfort, nausea, dryness of mouth, vertigo.

2/3104MB

Pyribenzamine® hydrochloride
(tripelennamine hydrochloride CIBA)

CIBA
SUMMIT, N. J.

Thirteenth Annual Conference

RENO SURGICAL SOCIETY

FINE ARTS BUILDING — UNIVERSITY OF NEVADA
RENO, NEVADA

August 15, 16 and 17, 1963

PAUL A. CHANDLER, M.D.
President..........................American Ophthalmological Society
Boston, Massachusetts
"Glaucoma" & "Ocular Injuries"

JACK M. FARRIS, M.D.
Associate Clinical Professor of Surgery
University of California, Los Angeles, California
"New Concept for the Treatment of Benign Gastric Ulcer" & "Surgical Treatment of Malignant Melanoma"

BENJAMIN FELSON, M.D.
Professor of Radiology and Director of Dept. of Radiology
University of Cincinnati, Cincinnati, Ohio
"Some Fundamentals of Chest Roentgenology" (in two sections)

EDMUND B. FLINK, M.D.
Professor & Chairman of Department of Internal Medicine
University of West Virginia, Morgantown, West Virginia
"Principles of Fluid and Electrolyte Therapy" & "Treatment of Acute Renal Insufficiency"

JAMES L. POOL, M.D.
Professor of Neurosurgery, Columbia University
Director Neurosurgical Service, Presbyterian Hospital New York City
"Recent Developments in Diagnosis and Management of Intra-cranial Hemorrhage" & "Usual and Unusual Brain Tumors Causing Impaired Vision"

HENRY SWAN, M.D.
Professor and Head of Department of Surgery
University of Colorado, Denver, Colorado
"Experimental Hemorrhage and Some Therapeutic Implications" & "The Homotransplantation Problems; Basic Considerations and Present Status Report"

JAMES N. WILSON, M.D.
Staff Othopedic Surgeon, Los Angeles County Hospital
Los Angeles, California
"Treatment of Common Disorders of the Hand" & "Treatment of the Acutely Injured Hand"

JOHN W. CLINE, M.D............... San Francisco, Calif.
Past President, American Medical Association;
Past President, American Cancer Society;
► Moderator, Saturday morning panel.

SOCIAL EVENTS

THURSDAY LUNCHEON
August 15 ....University Commons
(Ladies Invited)

FRIDAY PANEL LUNCHEON
August 16 ....University Commons

HEURIGENABEND
(Waltzing, Wine and Roses—Viennese Style)
Friday evening, August 16
Hidden Valley Country Club

☐ I Plan to Attend

☐ Please Send Copy of the Formal Program

PLEASE MAKE RESERVATIONS AS AVAILABLE - AT THE

☐ El Cortez Hotel
☐ Mapes Hotel
☐ Holiday Hotel
*☐ Riverside Hotel

*☐ Town House Motor Lodge
*☐ Cavalier Motor Lodge
*☐ River House Motor Hotel
*☐ Continental Lodge (Headquarters)

☐ I will attend but will arrange my own accommodations.

☐ Enclosed find check for $10.00 for hotel reservations.

* **Swimming Facilities**

For ______________ From ______________ Time ______________ to ______________ Time ______________
No. of Persons — Arrival Date — Date of Departure

Name ______________ Address ______________

City ______________ Zone ______________ State ______________

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In all degrees of essential hypertension

Help protect the kidneys and other threatened organs

When treatment of hypertension is effective the danger of damage to the renal system is reduced.[1-2] "Hypertensive patients suffer from vascular deterioration roughly proportional to the severity of the hypertension ... Reduction of blood pressure to normotensive levels reduces or arrests the progress of vascular damage with a resultant decrease in morbidity and mortality."[1] *Because Rautrax-N lowers blood pressure so effectively, it will help provide this important protection not only for the kidneys but also for the heart and brain of your hypertensive patients.* Rautrax-N is effective in mild,[3] moderate,[3,4] or severe hypertension.[4,5]

Dosage: Initially, 1 to 4 tablets daily preferably at mealtime. For maintenance, 1 or 2 tablets daily.

Side effects and precautions: Rauwolfia preparations may cause reversible extrapyramidal symptoms and emotional depression. Caution indicated in use with depression, suicidal tendencies, peptic ulcer. Minor side effects: diarrhea, weight gain, nausea, drowsiness. Bendroflumethiazide may cause reversible hyperuricemia and/or gout, unmask latent diabetes, increase glycosuria in diabetics. Caution indicated in use for patients on digitalis, with severely damaged kidneys, renal insufficiency, increasing azotemia, cirrhosis. Contraindicated in complete renal shutdown. Minor side effects: leg or abdominal cramps, pruritis, paresthesias, mild rashes.

Supply: Rautrax-N—capsule-shaped tablets providing 50 mg. Raudixin® [Rauwolfia serpentina whole root], 4 mg. Naturetin® [bendroflumethiazide], and 400 mg. potassium chloride. *Rautrax-N Modified*—50 mg. Raudixin [Rauwolfia serpentina whole root], 2 mg. Naturetin [bendroflumethiazide], and 400 mg. potassium chloride, in capsule-shaped tablets. For full information, see your Squibb Product Reference or Product Brief.

References: (1) Moyer, J. H., and Heider, C.: Am. J. Cardiol. 9:920 (June) 1962. (2) Brest, A. N., and Moyer, J. H.: Pennsylvania M. J. *63*:545 (Apr.) 1960. (3) Berry, R. L., and Bray, H. P.: J. Am. Geriatrics Soc. *10*:516 (June) 1962. (4) Hutchison, J. C.: Current Therap. Res. *4*:610 (Dec.) 1962. (5) Feldman, L. H.: North Carolina M. J.: *23*:248 (June) 1962.

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Squibb Quality
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RAUTRAX®-N RAUWOLFIA SERPENTINA WHOLE ROOT (50 MG.), BENDROFLUMETHIAZIDE (4 MG.) WITH POTASSIUM CHLORIDE (400 MG.), SQUIBB

vacancy

"The direct cost for caring for the mentally ill is $1.7 billion a year. Workers who become mentally ill lose over half a billion dollars in earnings each year.

*Staff in one mental hospital recently tried an experiment with 65 patients who had been confined for an average of 13 years. They practiced the best treatment methods now known and, within six months to a year, 37 of these patients were well enough to be discharged. Only eight of the discharged patients failed to hold the gains they had made for at least a year after they left the hospital."**

Hope now, where there was no hope. Drugs which help now, where there were no known drugs which helped—even five years ago. Independent drug research is continuing in this vital area. But, should it be discontinued because the cost must somehow be reflected in the ultimate price of the new drug—if it is to be discovered? Or should the sign read, as it has throughout time in overcrowded mental institutions: "NO VACANCIES."

*U.S. Department of Health, Education and Welfare, Public Health Service Publication No. 813.

This message is brought to you on behalf of the producers of prescription products.

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in acute nausea and vomiting

dramatic results with

Dramamine®

BRAND OF

dimenhydrinate

G. I. Upsets: Whether induced by infection or, perhaps, a simple functional disturbance, nausea and vomiting are effectively controlled by Dramamine [dimenhydrinate]. The easy-to-take liquid form is ideal for the patient who finds tablets hard to swallow. Dimenhydrinate may mask symptoms of streptomycin activity and should be used with caution in these circumstances.

the classic antinauseant

LIQUID/TABLETS/ AMPULS (FOR I.M. OR I.V. USE)/SUPPOSICONES®

Research in the Service of Medicine

SEARLE

Dangerous Drugs

Addiction with its harvest of crime, cannot be overlooked or ignored. Unfortunately, physicians are involved. As a social, rather than as a physiologic phenomenon, it is not confined to narcotic drugs. Theft, burglary, holdup and more serious crimes are the ugly fruit of addiction to amphetamines and barbiturates as well as to morphine and heroin.

Motivation to criminal activity appears to be the same, whether addiction is physical, as with narcotics, or primarily habitual, as is the case with most users of the non-narcotic drugs, now classified as *dangerous drugs.* His source of supply is the paramount concern of the addict and it becomes important enough to drive all other thoughts from his mind or to impel him to crime in order to satisfy his need.

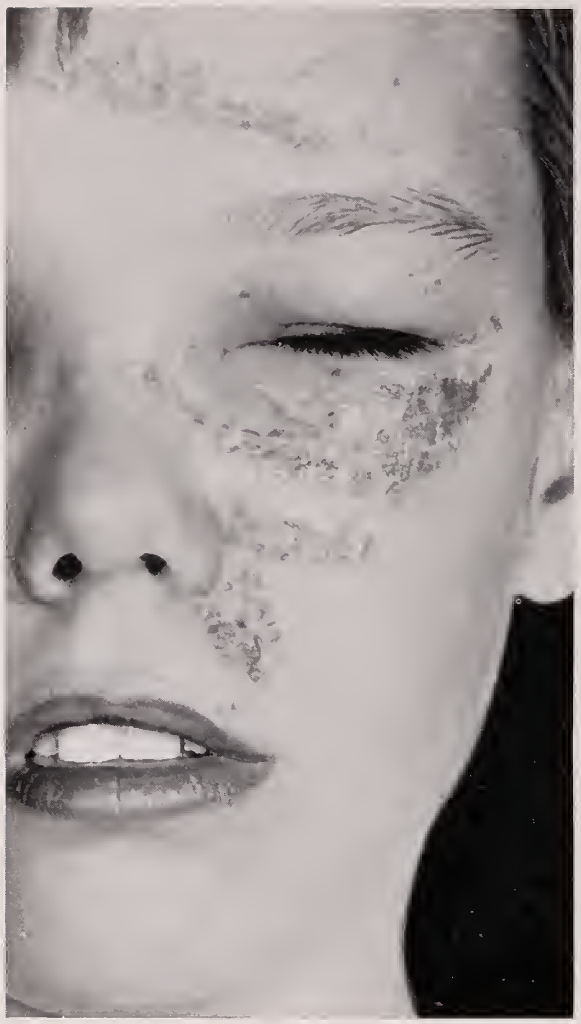
He will resort to the most devious of methods to obtain his drugs, often victimizing the unsuspecting physician in the process. An unsavory aspect of the problem is the willingness of a few physicians to abandon professional integrity by selling prescriptions for these drugs. This nefarious business has gone on, not only in the larger cities, but also in smaller communities where suppliers of the illicit market have found physicians willing to engage in the corrupt practice. Law enforcement officials have discovered at least one well travelled route followed at regular intervals by a purchaser of prescriptions who returns with them to a city where he can have them filled by a few pharmacists who ask no questions.

It is obvious that the number of physicians and pharmacists who support this traffic is small. Statistically it would be insignificant but as a social evil the activity is important enough to demand continuing, serious attention by medical organizations and law enforcement agencies.

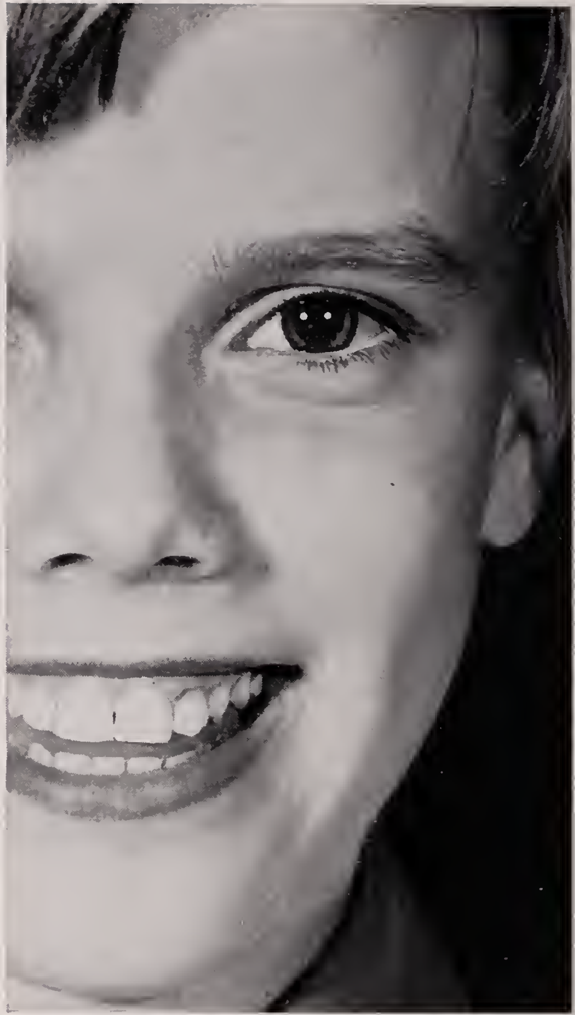
Legislative sessions in Oregon and Washington this year have considered numerous bills dealing with this problem. There has been some redefining, to include newer products under definition of dangerous drugs, and tightening of regulations in attempt to control dispensing and use. Enforcement officials in Oregon and in the city of Portland are now dealing with all dangerous drugs, as with narcotics, according to federal regulations on opium, coca leaves, isonipecaine or opiates. (Regulation No. 5, joint regulations of the Bureau of Narcotics and the Internal Revenue Service.)

A new tool was given the Washington State Medical Disciplinary Board, a branch of the state government, when redefinition by the legislature put amphetamines and barbiturates into the category of dangerous drugs. The new law, which went into effect the first of this month, will enable the Board to apply to this problem the very important power it has for control of unprofessional conduct by physicians. A communication from the chairman of this body appears on page 542 of this issue.

The problem, however, will not be solved by enforcement agencies alone. Indeed, there is reasonable doubt that it will be solved at all, since one must assume that the human race will go on producing individuals unable to meet the vicissitudes of existence without escaping into stupor or drugging themselves into brummagem bravery. Any physician in practice may expect to meet the problem, any time, in almost any way. Awareness that it exists will be helpful.



Poison ivy dermatitis



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Saskatchewan's Great Confidence Game

GORDON B. LEITCH, M.D. / MARCUS O'MALLEY, B.A. Portland, Oregon

The Canadian province of Saskatchewan has a common 49th parallel border with the American states of Montana and North Dakota and is larger than both combined. But in spite of the many schemes of socialism destined for later application to the United States which have received trial runs there since the 1930's, precious few Americans concerned themselves with these pilot-plant runs, if they knew about them. Saskatchewan was about as remote as Venus, or perhaps Tierra del Fuego. Or was until July 1, 1962.

On that date the province's physicians closed their offices in protest against seizure of their profession by the provincial government (with some federal politicos kibitzing). Saskatchewan mushroomed into world news in what was dramatically, but incorrectly, scare-headlined as a doctor's strike.

With the headlines, many Americans for the first time became aware that something unusual involving medicine was taking place to their north, largely because this coincided with a proposal of their own government to conjure a medicare rabbit out of the U. S. political hat. But it was not clear exactly what was going on. And Saskatchewan was still a distant place. So when a settlement of sorts was announced and physicians there resumed normal practices (they had practiced on a no-fee, emergency basis during the government-created crisis) interest in the matter promptly subsided.

Unfortunately for those addicted to apathy, the settlement, as those recognizing the nature of events indicated and time has confirmed, is proving not to be the cure anticipated by the naive or hopeful. While the surface conflict has cooled, at least temporarily, Saskatchewan's medical gimmick political brew continues to bubble, with every indication that further outbursts may occur at any time. For the underlying fundamental issue remains as unresolved today as it was before the uproar.

Except where necessary for clarity, details culminating in the government's move to seize Saskatchewan's medical profession and the reaction it provoked are too lengthy and involved for inclusion here. The story is well told, however, in

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Dr. Leitch, long interested in political affairs and with backgrounds derived from Scotland (an ancestor survived the massacre of Glen Coe) by way of colonial Virginia and Canada, is peculiarly fitted to report on the Saskatchewan situation. He is a former resident of the province and a graduate of the University of Saskatchewan where he was editor of student publications and correspondent for a provincial newspaper. He was an early advocate of a College of Medicine as a component of the University. He is well acquainted with many prominent Saskatchewanians including some participants in the events recorded, and has a first-hand familiarity with governmental and other attitudes there.

Mr. O'Malley contributed much of the collateral background investigation in the preparation of this report.

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fully documented play-by-play sequence in a pamphlet* which is must reading for those interested in safeguarding freedom-type medical care or who may be unfamiliar with the province and recent political history there.

Untold, however, except for occasional indications between the lines are the psychopolitical aspects of the affair. And it is as a practical exercise in psychopolitics that events in pilot-plant Saskatchewan—if we are willing to learn from the experience of others—hold significance for us in the United States of America.

In this respect it is doubtful that either Americans roused to interest by the events of July 1962 or the vast majority of Saskatchewanians themselves are yet aware that they were—and still are—respectively sideline observers of, and victimized participants in, psychopolitical activities amounting to a gigantic confidence game involving medical window dressing.

This is an analytical report of that confidence game.

I Background

In attempting, from events in Saskatchewan, to draw valid conclusions applicable to our situation as we brace ourselves for another go-round with our own Labor-Socialist Establishment, it would seem easy to be critical. Merely to be critical in retrospect and from safety of the sidelines is, of course, pointless. But if what transpired there can help us in the United States to keep medical care out of a government noose or may now suggest to Saskatchewanians how they may end their continuing predicament, it is important that the matter be subjected to searching analysis. Some of this, indeed, may seem critical although it is intended only to be objectively informative.

Ordinarily it might be supposed that Saskatchewan, with less than a million people scattered over an area as large as California and Oregon combined, and an economy basically agricultural, would offer little as a pilot-plant site for the compulsions of collectivism whether called socialism, fascism, communism, one-worldism, or what have you, all of which have the common denominator of depriving the individual of his freedom.

But opportunity is where one finds it and certain circumstances combined to make the province an inviting test ground for the various projects in socialism conducted there in recent years.

Seldom mentioned, let alone considered in evaluating Canadian affairs, are two predisposing factors the importance of which it is difficult to overestimate.

Canada has no official Constitution as we understand it. The Enactment which substitutes for such a document has some defects, the most notable probably being absence of a Bill of Rights. Under such circumstances, as events in Saskatchewan illustrate, the mere passing of a law can become the equivalent of a loaded gun held against a citizen's head by government.

Coupled with this major defect is the nation's long established acceptance or tolerance of statism—not to be confused with the related phenomenon of nationalism—and flirtations with a number of plausibilities associated with statism, such as the naive belief that human nature can be altered by the passing of laws; that there is something inherently good or trustworthy in government per se which is lacking in individuals; or the delusion that penalties invariably exacted whenever fundamental, unchangeable, natural law is violated can somehow be avoided by political action.

The fact that most Canadians are unaware of the presence of these tremendous forces in their midst does not alter the reality of their presence. Or lessen their effects. They may take some small comfort in the fact that the mass of people, including us in the United States, have been conditioned to turn to government for relief whenever difficulties arise, but this does not alleviate their situation. The predisposing background is mentioned here in analytical objectivity only because it assured fertile soil for the seeds of subsequent events—and because under such circumstances the resolute protest of Saskatchewan's physicians was all the more remarkable.

Against this predisposing background came the precipitating circumstances: the great depression of the 1930's, notably severe in Saskatchewan's agriculture-based economy, and a succession of climate-induced crop failures bordering on the disastrous. In the resulting widespread despair many people lost their discernment in matters involving their immediate well-being as they saw it, hence became more receptive to slick ideas or proposals they otherwise might have rejected.

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* "Saskatchewan's Embattled Physicians—A Tribute to Gallant Defenders of Freedom"—Marjorie Shearon, Ph.D., Shearon Legislative Service, 8801 Jones Mill Road, Chevy Chase 15, Maryland.

Intuitively alert to the possibilities lurking in such situations, Canada's numerically few but highly disciplined Socialists promptly moved to take full advantage of the despair-created opportunity. Assembling in Regina, the Saskatchewan capital, the blood brother collectivists fashioned what was announced as a new political party, calling itself the Cooperative Commonwealth Federation (CCF). This was in 1933 but in 1962 and today, after an intervening change of skin and leaders, it is known as the New Democratic Party (NDP). With the announcement, as the "party" sought to obtain tangible-value votes from the electorate in exchange for the nebulosity of political promises, the province's adventure in collectivist deceptions—the great confidence game—was launched.

This designation for events in Saskatchewan may be disliked. It is readily conceded that considerable deception, and a bit of the larcenous as well, is possible with any venture involving politics since the payoff comes in terms of victory and not in how victory was achieved. Nevertheless the designation seems fully warranted by the pattern of events and a record which speaks for itself.

In its Regina *manifesto* of July 1933 the new "party" clearly confirmed its Marxian origin in stating its aim "to replace the present capitalistic system . . . by a social order . . . in which economic planning will supersede unregulated private enterprise and competition . . . ." Also the *manifesto* indicated the "party" aimed "to organize a system of public health services including medical care" which would be extended to all the people. For a "party" seeking elective support such frankness might be laudable—or calculated to convey an impression of integrity as prelude to additional activity to reach the ultimate goal. Unfortunately for integrity the *manifesto* itself contained an omission which constitutes a major, basic deception.

In the *manifesto* the intent to replace the existing capitalistic system with "economic planning which will supersede unregulated private enterprise" was clearly and correctly stated. The deception lies in what was *not* stated. "Economic planning" and regulation to replace the unregulated are impossible without (and add up to) one thing: People control.

Of necessity, *people control* implies some person or persons to do the controlling, be it little or much at any given moment and without reference to how it is accomplished. Moreover, people control invariably extended to its logical ultimate can result only in a master-servant relationship, a re-establishment of feudalism at best, slavery at worst. People control is just not compatible with the full individual or personal freedom and responsibility ordinarily associated with what passes as democracy. Thus the real package offered by Saskatchewan's collectivists (there never was an old Democratic party in Canada with which to compare a "new" one so the deception continues) differed materially from the semantic deception put forth to woo the electorate.

Although the new "party" with the Marxist ancestry made a determined pitch to attain political office, it failed to make the anticipated headway during its earlier years, against the traditional old-line Liberal and Conservative parties, in part because farmers remained somewhat skeptical of the revolutionary nature of the "party's" bait.

But socializers and their blood brothers in collectivism are nothing if not patient, full willing to wait for their quarry to relax the constant vigilance necessary to avoid capture. And they are persistent while they wait. Undaunted by early failure to attain political office, they maintained and intensified their efforts to persuade the Saskatchewan electorate to elect them as rulers. With continued adversity of nature, depression, and disruptions linked with outbreak of war, eleven years of persistence paid off. In the 1944 provincial election CCF captured 47 of the 52 legislative seats and became Saskatchewan's government.

For the first time in North America a Socialist "party" avowedly dedicated to Marxism had achieved its goal of political office. It was the government, in full control of the machinery and the power of the state.

With that event, entirely aside from the intent expressed in the Regina *manifesto*, government moves to control medical care for collectivist ends—people control—became a predictable certainty, the only question being when.

II Misconceptions

It seems strange that so many Saskatchewanians should display such misconceptions of both medical care and politics as events disclosed. It can only be assumed that they lacked understanding in depth of government, particularly of collectivist government regardless of semantic label worn, and of the characteristics which make medical camouflage so highly regarded for political purposes involving deception.

If a course of action or inaction is now to restore safety of medicine in Saskatchewan and secure its safety in the United States, that is, the freedom of physicians to furnish and of patients to receive high quality medical care of their selection unhampered by political interference, restrictions or other coercions, a clear understanding of these matters is essential.

Once the concealing mantle of semantics is swept aside it is possible, as in Saskatchewan, to recognize government interest in medical care for the deception it is. Other than being a convenient sacrificial victim on the altar of an expanding people control program, the government's move to seize the medical profession there had nothing to do with medical care. But it had a great deal to do with psychopolitics.

The point, demonstrated in Saskatchewan but applicable elsewhere, is sufficiently important to warrant re-stating. *Government interest in medical affairs is not and never was medical. It was and is political.* Consequently, if one is to avoid being "had" in this respect it is necessary to know some facts of political life.

The first, foremost, and constant axiom of politics is that every event must be resolved in terms of increased power for the political apparatus. This has no reference to party, as witness a recent refusal of a Saskatchewan political party leader to undertake repeal of their offending Medical Care Act in the event his party should come to power in the next election. It is also the compulsion which stimulates the manufacture of crises—the sad health plight of our oldsters in election years for example—if no "events" conveniently appear, and even to provoking a foreign war if necessary under some circumstances.

A second axiom is that political bureaucracies never die; they just go on expanding. Whenever and wherever government engages in people control activities beyond defense and common justice, the efforts are never conducive to release of human energy but just the reverse. Consequently they are foredoomed to failure. The failure, however, is never attributed to this basic error of control *per se*. Instead, failure of the "economic planning" beloved of collectivists is attributed to inadequacy or insufficiency of the controls. And the remedy invariably deemed curative is more of the same—extension of existing, or creation of additional controls. All of which calls for more bureaucracy.

Furnishing integral support for these axioms is the psychopolitical processing people receive to condition them to accept without question the spurious doctrine of virtuous government when actually nothing is farther from the truth. Government, particularly centralized "planning" government, is not something special, something inordinately good, something with extraordinary knowledge and skill beyond those individuals comprising it, something with unlimited resources peculiar to itself, or something too complex and apart to be readily understood by any except those directly conducting its affairs. The sage who observed that the least government is the best government knew whereof he spoke, but he was speaking from the viewpoint of those who endure government, not its functionaries who stand to reap advantage from these misconceptions.

Probably most important if one would avoid being "had" in such matters is realization that government has absolutely no resources of its own. Government creates nothing; government produces nothing. Essentially a parasite, it can only take by the exercise of compulsion, the police power, what others first produce or have. And of course this power to take—to tax, to regulate, to license, to seize or confiscate—means government also has the power to ruin and destroy.

It may be helpful also to realize that the push for "planning" government, for socialized medicine and for other people control measures, comes not from North America but from dedicated collectivists abroad working toward worldwide people control from the International Labour Organization headquarters in Geneva, Switzerland (but during World War II transferred to an eastern Canadian city where the event is now commemorated by a plaque). A hangover from the old League of Nations, it is "affiliated" with, but not a direct part of, the United Nations. It conducts its affairs independently, somewhat in the role of a world supergovernment which for implementation turns its grandiose "plans" for people control over to its member countries or to the United Nations.

It is dedicated to the operating principle of *Gradualism:* A little here, a little there, a little more from time to time, the foot in the door, the camel's nose under the tent, until all is attained. But nothing to arouse firm opposition at any given time. Inherent in this is the tactic of one step backward—retreat or compromise as in the Saskatoon agreement which reopened physician offices in Saskatchewan in 1962—should serious opposition develop, and when opposition ceases to be vigilant or subsides followed by two or more steps forward again, the original and the others for good measure to offset the delay.

In this one-step-backward-two-steps-forward technic of gradualism, why is something medical so highly regarded for purposes of political deception and the people control without which there is no collectivism?

First, relatively few people understand the delicate nature and equilibrium of components in the medical care they take for granted.

Second, most people, physicians excepted, are unaware of medicine's extreme sensitivity to restrictive influences regardless of source and the impairment which inevitably follows, hence are unlikely to protest political shenanigans involving or affecting medical care. Should physicians protest, they can be ignored since they are a vote-poor political minority—unless the protest is of the order recorded in Saskatchewan.

Third, because of the personal nature of pain and illness and the fact most people sooner or later experience some aspect of pain or ill-health, something involving medical care is likely to have a widespread and personal appeal which, somewhat as with religion and motherhood, makes it almost certain that emotions will rise above reason in the political arena.

And, finally, government gets a dossier on everyone!

III Deception

Against background factors previously mentioned, Saskatchewanians seem to have entertained some serious misjudgments which contributed to the events of July 1962.

They assumed, as have many others elsewhere including the United States, that without risk of control or dictation a fair agreement or "accommodation" can be reached with any governmental entity having tax or police power. That is to say they accepted the widely publicized but entrapping proposition beloved of people controllers on the march that with tax funds for which it is responsible a government can assist, contribute to or subsidize a quasi- or nongovernmental activity without controlling the activity so subsidized.

Many mistakenly assumed, as it was intended they should, that collectivists—people controllers—are just another political party!

And many Saskatchewanians, physicians among them, seriously underestimated the nature, capabilities and ruthlessness—particularly the ruthlessness—of the collectivists committed to controlling them.

It is true that Saskatchewan's socialists embraced the *form* of a political party for the advantages this protective coloring gave them, just as our own Labor-Socialists find it advantageous to conduct their "inside" activities under the protective label of a major political party. But whereas traditional Liberal and Conservative parties sought political office only in order to govern, the prairie province's collectivists, as collectivists everywhere including the United States, sought office so as to replace the established system with one in which government would control the people instead of the people controlling the government.

Today, under so-called democratic conditions prevailing in Canada and the United States, people control is no longer bullet imposed. But people generally are unaware how easily our taken for granted "structures of democracy" can be subverted or sabotaged to destroy a people's freedom. All that is needed is to "persuade" people to do it to themselves by the wholly legal and respectable, but dangerous, device of majority vote, ballots.

The process could be illustrated by citing some psychopolitical efforts prevalent in the United States. But to do so would stir allegations of witch-hunting, that favorite collectivist tactic for diverting or silencing critics who see through their people control schemes. However, this cannot be said of Saskatchewan. It actually happened there and the record of events is beyond dispute.

Despite its pertinency it is not within the scope of this analysis to detail the promises and other chicanery comprising the web of deception perpetrated upon a trusting, despair-conditioned electorate by Saskatchewan causists following promulgation of the Regina *manifesto*. The story is well told in the Shearon pamphlet to which previous reference was made. But it is within scope of this report to examine pertinent aspects of the "persuasion" involving medical care in Saskatchewan covering the period from the coming to power of the CCF to the present.

IV Force

When people controllers, regardless of how they call themselves, come into control of government on strength of promises to fashion a "planned" economy, (which boils down to taking from some and giving to others) they are caught in a trap of their own devising and faced with three necessities.

They must continue in office indefinitely if they are to expand their proposed "planning" to the ultimate. To remain in office they must expand old or develop new political bait, and be careful in the process that what is taken from some to be given to others is taken from a politically impotent minority. And they must arrange that truth is concealed, distorted or otherwise disguised lest people see through the chicanery and turn against them.

Faced with these conditions, medical care comes close to being the perfect political gimmick. Its widespread emotional appeal makes it a most excellent something-for-nothing; physicians who furnish or direct it are a vote-poor, political minority; and the product easily can be misrepresented as "insurance", "health benefits" or otherwise be semantically disguised.

Considering their long exposure to psychopolitical conditioning, persuading people to go along with medical care as a gimmick for benefit of power hungry politicians presents no problem. It is just another something-for-nothing —they think. But persuading physicians who understand it, and without whose services the gimmick is valueless, is a different matter. Thus the problem becomes the willingness of physicians to acquiesce while those in the political apparatus rig the gimmick to their own needs, as happened here with our Kerr-Mills legislation, or try to force physicians to relinquish their responsibility for unhampered medical care, as in Saskatchewan.

With the usual gradualism suited to the situation, first overt act in Saskatchewan was directed not toward physicians but to hospitals. For reasons too involved for inclusion here, modern hospitals seem plagued with sufficient financial problems that they are peculiarly susceptible to financial blandishments from government. Thus it was no trick at all for Saskatchewan's government, with its 1948 Hospitalization Act providing subsidies for hospitals, virtually to gain complete control of all the province's hospitals and the services ancillary thereto.

While this entering wedge was being fashioned, a great point was made, just as it is made in our own continuing King-Anderson moves, that physician services were not the least involved. The official line was that this was hospitalization, not doctors' services, and in no respect should it be deemed socialized medicine or any part thereof. The ruse worked.

Because it seemed unlikely to disturb hospital staff relationships to any appreciable extent or through the naive belief—still held by some physicians—that physician responsibilities carried out within confines of a hospital are somehow different from those exercised outside hospitals and the two can be kept separate and apart, Saskatchewan physicians committed the grave error of standing idly by while government took over the hospitals. They failed to realize that since theirs is the responsibility for patient admissions, treatment, and duration of stay in hospitals, it must be only a question of time until government must move to control their services as well, if only to lessen the effect of this variable in hospital management. By the late 50's, with hospitals safely netted, that time arrived.

Influenced by physician failure to protest the hospital take-over, the Saskatchewan government notified medical association officials that measures necessary to implement health provisions of the Regina *manifesto* would be instituted in due course. It was indicated that physicians would have an opportunity to express their views, once this took place. But the implication also seemed quite clear that any views expressed would be immaterial, that the government's scheme would be inaugurated regardless.

When this blunt approach failed to produce the docile acquiescence government officials, based on their hospitals take-over experience with physicians, had reason to expect, and when it became clear that physician leaders would not be subverted, government officials turned to a tactic with a long success record in people control efforts, the creation of a "public" prestige pressure mechanism designed to overcome mounting physician resistance. An Advisory Planning Committee—the name of such devices is immaterial—was created, to which the government agreed to appoint three practicing physicians while the other nine members would represent government and various segments of "the public."

In addition to the 9 to 3 loading, as such things are arranged, a highly regarded former president of the provincial University, an excellent scholar and academician but in the intricacies of medical care strictly a neophyte, was named chairman, thus assuring much prestige and "public" support for the committee report with which resisting physicians would be pressured into line.

Whenever medicine is confronted with one of these "public" pressure devices—Committees on the Nation's Health, Little White House Conferences, Panels of Consultants on Aging, etc. are not strangers to us in the United States—the profession faces the dilemma of being damned if it participates, since this will be misrepresented as approval, and being damned as obstructionist if it doesn't. In their predicament, Saskatchewan physicians, after much soul searching and insisting on terms of reference which permitted a minority report, elected to function with the committee in the hope they might have some opportunity to protect the public from collectivist deceptions masquerading as medical care. But they soon realized the futility of their position so proceeded to draft the minority "Memorandum of Dissent" made necessary by the circumstances.

When subsequently this dissent was approved unanimously by medical profession officials while simultaneously the majority report of the Advisory Committee was rejected, Saskatchewan's people controllers cast aside all pretense of respectability and fairness in favor of direct ruthless action. The collectivist government passed the so-called Medical Care Insurance Act. A government held gun, loaded and cocked, was pressed directly against the profession's head. The issue was not medical care. It was bending people, at the moment physicians, to the government's will.

V Courage

The gun-at-head legislation confronted Saskatchewan's physicians with a bitter choice both for their profession and as to their personal livelihood. Negotiations and remonstrances, aside from proving the government thoroughly untrustworthy and without the slightest interest in medical care except for its gimmick value to fool the public, had failed. In absence of a protective Bill of Rights and considering the appointive derivation of the Saskatchewan judiciary, recourse to the courts was pointless. Moreover, the Medical Care Insurance Act with its built-in people controls was a *fait accompli*, the law of land. Political action was impossible; Saskatchewan has no recall law. And, in any case, doctors constituted a vastly outnumbered minority. In view of some notable precedents, capitulation at least would have been understandable.

Instead, with courage rarely seen today in our continuing struggle with people controllers of all stripes, the province's physicians took the only course remaining to them commensurate with freedom. They refused to have anything to do with the government's scheme. To make certain the refusal was clearly understood, they took the history making step of closing their offices. Some even left Saskatchewan for good.

Other than to keep the record straight, it is not within the scope of this report to relate in detail what happened in Saskatchewan while physician offices remained closed. Two points, however, should be kept crystal clear.

First, contrary to scare headlines and news media reports, Saskatchewan physicians *did not strike!* It is true they closed their offices. But they met medical needs of the people through clinics located at hospitals, and without charge for their services. It was hoped only emergency cases might be handled. But, significantly, it was left to each patient—not to physicians—to determine if the health problem should be considered an emergency. Physicians had no quarrel with patients, but solely with a government intent on increasing its people control.

Second, throughout the upheaval Saskatchewan mass communication media maintained an extremely high degree of accuracy and objectivity in their reports and commentaries. It was almost exclusively beyond provincial borders that physicians were pilloried and smeared in fashion long familiar to us in the United States. And it was elsewhere that some Saskatchewan events were unreported, distorted or otherwise "news managed."

Aside from being the only course open to them commensurate with freedom, the action of Saskatchewan physicians proved one which physicians throughout ballot nations (as our own Association of American Physicians and Surgeons has long pointed out) might well emulate to safeguard unhampered medical care in the public interest. For the fact is their action pricked the government at its two most sensitive points and with medical care's most potent weapon. *Only physicians are qualified and competent to furnish medical care.* If government is unable to spend its funds for a project it conceives, there is hardly justification for the project.

Thus, so long as it is important to maintain even the semblance of so-called democracy, government hardly dares pull the trigger against physicians when they refuse to accept involuntary servitude at government behest. To do so not only would destroy medical care, since physicians cannot practice unhampered medicine from jail cells or concentration camps, but also would destroy once and for all the fiction that government values medical care for its own sake rather than for its gimmick value in expansion of political power.

Whether Saskatchewan physicians foresaw the full implications of their dramatic refusal may be questioned, though undoubtedly they recognized the risks involved. Since they lacked other acceptable choice the point is inconsequential. Paramount is the fact it required fortitude of the highest order to take their totally unprecedented action, knowing that collectivist government cannot withstand defiance or non-compliance, but not knowing the nature and extent of the wrath which certainly would be visited upon them for their *lese majeste*. That they continue to practice the best medicine they can in the face of economic pressures, reprisals and other harassments to which they are now subjected speaks additional volumes for their integrity and their courage.

VI Bait

With closure of physician offices the situation immediately changed for both disputants. Physicians faced the problem of what additional moves they could make in case the government remained adamant. And the government faced the problem of getting physicians to reopen their offices. It could try further coercion or recede from the position taken with passage of the gun-at-head "insurance" law, knowing that either could be damaging or even might be fatal to its future political prospects. In effect the disputants found themselves tiger mounted, facing the problem of how to dismount with the least ensuing damage.

Under such circumstances, search for a so-called middle ground compromise is standard. But here the dispute involved a principle, namely, people-control versus freedom to accept or reject. And principles can only be abandoned, not compromised.

As time passed and the physicians gave no indication of abandoning their fight for freedom, a stand emphasized by several top-notch doctors leaving the province permanently to establish practices elsewhere, people began to appreciate the merit of their doctors' position and to display a mounting concern for the status of their medical care. In turn this led to increasing pressure upon the government to settle the dispute in a manner making it possible for physicians to return to their normal practices.

In its predicament the government turned to an architect, recently turned critic, of Britain's socialized medicine scheme. Officials invited this medical consultant and former member of the British parliament, rewarded for his services with a peerage, to come to Saskatchewan to "mediate" the dispute.

On first appearance the invitation seemed a conciliatory gesture. But closer scrutiny indicated otherwise. Saskatchewan physicians had no advance knowledge or intimation the government would entertain mediation. Furthermore they were given no voice whatsoever in selection of a possible mediator. Conditions in Britain where physicians had acquiesced in the imposition of socialized medicine without significant protest, did not warrant choice of the nobleman as an impartial mediator under conditions prevailing in Saskatchewan. In spite of his title and prominence, but more likely because of them, clearly he was the government's man in further government "prestige" tactics to pressure physicians into its predetermined line.

In the government's previous resort to this tactic, Saskatchewan physicians with their "Memorandum of Dissent" avoided serious entanglement. But this time the problem was to undo a *fait accompli*, a much different matter. Physician representatives were well aware that "mediation" was loaded against them; they also sensed they had been outmanoeuvered to the extent that to avoid further terrific smearing for political purposes they had no alternative but to enter the proceedings in the remote hope that a proven untrustworthy government might experience a sufficient change of heart to work out a settlement which would be fair.

What transpired during the prestige baited negotiations which produced the Saskatoon Agreement (after the "mediation" site) is pertinent, but too lengthy and intricate for detailed inclusion here. In summary, however, these followed the one-step-backward-two-steps-forward, collectivist pattern previously mentioned. By a "concession" amendment to the so-called Medical Care Insurance Act, physicians were "restored", under extremely tricky conditions permitting no leeway, the right to treat people as private patients so long as financial arrangements remained essentially separate and apart from the compulsory government scheme. Since such patients still are taxed for the compulsory scheme, a sop in the form of reimbursement provisions was added. But, significantly, the gun-at-head legislation was not repealed.

Today, with physician offices again open for private medical practice and the government off the hook of its own making, it might be supposed conditions of relative tranquility would prevail. Such is not the case.

Through the economic power resulting from control of tax raised "medicare" funds, through financial pressures linked with reimbursement, by *interpreting* the settlement to its own liking, and by such things as urging formation of private patient medical "cooperatives", employing government tax supported salaried physicians, or encouraging sabotage of the Saskatoon Agreement at every opportunity, the government in Saskatchewan maintains a constant harrassment of physicians who continue to defy it. Thus, Saskatchewan physicians are learning at first hand that in the confidence game collectivists play agreements are merely tactical devices to be honored only so long as it is to collectivist advantage to do so.

VII Blight

With sabotage failure of the Saskatoon Agreement, what of the future? One prediction is as good as another under the circumstances, but amid all the confusion certain realities stand out.

First, the Saskatchewan government, as with all collectivist government, cannot successfully withstand defiance or ridicule to the point of failure. Accordingly it must continue all possible efforts to harass, club or cajole physicians into its scheme of things, in keeping with collectivist tactics and necessities.

During the recent Canadian national election a representative candidate obviously willing to spread the medical care gimmick Dominion wide stated that he looked for the medicare situation in Saskatchewan to settle down and stabilize, i.e., the government's scheme would prevail, in "about" a year. By then, he explained, the doctors would be so tired and frustrated in their opposition to government that they would abandon their resistance to government take-over. At which time the situation would be ripe for his party to extend medicare over the entire nation.

It is true he may have been voicing his own opinion; or he may have discussed the affair with some Saskatchewan government officials. In either case there is little doubt that this is the considered appraisal of the professional politician of collectivist persuasion, namely, physicians kept under constant harassment and government pressures will eventually abandon their struggle against government capture.

Second, before the events of 1962, the quality of medical care available in Saskatchewan compared favorably with the best available anywhere. This is no longer true. Quality became impaired the moment certain specialists and other capable physicians left the province permanently rather than submit to conditions of involuntary servitude. And the end is not yet in sight. Many capable Saskatchewan physicians have qualified or are qualifying for licensure elsewhere to fortify themselves against the day they may be compelled to leave the province in order to practice their profession unhampered. Moreover, replacements of comparable caliber, by reason of their very capabilities, are certain to avoid the province with its manufactured vexations. And if this were not enough there is the unnecessary burden placed upon physicians who do remain, daily becoming more evident, which overutilization inevitably places upon a medical system built around compulsion. Thus residents of the province seem assured a continuing, increasing, and probably permanent, impairment in quality of medical care available—unless current trends cannot only be stopped but also reversed.

Third, Saskatchewan physicians cannot continue the struggle indefinitely. Today for all practical purposes they are a valiant band besieged by their collectivist government, fighting for their professional and personal freedoms. But there is a limit to their endurance. Unless Saskatchewanians generally come to realize that their doctors' plight is also their own, and that their own unhampered medical care is at stake along with people control, and that *their* personal livelihoods may well be next, physicians appear to have the bleak choice of trying, against ruthless government odds, to fight their way out to freedom or of abandoning their homes in Saskatchewan to seek surroundings more compatible with professional or personal freedom. Or of remaining behind under conditions approximating enslavement which will assure the permanence of impaired medical care.

VIII Desiderata

This analysis would not be complete without mentioning the possible effects on the future of medical care in Saskatchewan of a final reality protruding from the mess there.

Such is the narcotizing effect of gradualism that Saskatchewanians may find it difficult to realize that they are being "had" in a gigantic confidence game. Or that government "planning" goes well beyond the present medical care aspect to the end that individuals will be reduced to permanent have-not status, beholden to government at every turn, though this will be concealed or denied. But without step by step understanding of the intricacies of gradualism to which they already have been subjected they have only to look about them to see the results. And to make comparisons.

For nineteen years give or take a month or so Saskatchewanians have enjoyed the promised blessings of the socialist brand of collectivist government. And for the same period of time they have seen their neighbor prairies provinces of Alberta and Manitoba surpass Saskatchewan in new business created or attracted, in natural resources discovered or developed, in population increase, indeed in virtually every category one wishes to mention. Except cost of government and pyramiding taxes.

In short, during this period of time the economies of Alberta and Manitoba, without benefit of socialistic government, developed unprecedented prosperity while that of the middle prairie province stagnated or retrogressed, largely because collectivist government by its nature is totally incompatible with the release of productive human energy. Saskatchewan's plight in effect constitutes a vote of "no confidence" stated in terms of a free market economy's most expressive ballots—dollars. And only actions well demonstrated through performance are likely to restore confidence sufficiently to warrant a different result in future dollar ballotings.

It might be assumed since this state of affairs accumulated under a gradualism linked with politics, and in the political arena, that corrections might be effected by political action leading to replacement of Saskatchewan's collectivist (NDP) government. Although interruption of collectivist continuity might be helpful any assumption of cure seems unwarranted considering the nature of politics and so long as many present attitudes prevail. At the last provincial election, with medicare the dangled political bait, collectivists polled only about forty per cent of the popular vote, so clearly are in a minority position in terms of total vote cast. But so long as the traditional old-line parties insist on three-way contests in all electoral ridings or districts, thus competing with each other for the non-collectivist vote while hard core collectivists with their forty per cent bloc romp off with victory, the margin is likely to prove adequate to maintain collectivist government in the province indefinitely.

Undoubtedly an astute politician could turn the situation to his personal or a non-collectivist party's advantage. A first test of this would be the ability to develop an accord between the traditional parties whereby against each NDP office seeker other parties would back one outstanding candidate of soundness, regardless of previous non-collectivist affiliation, thus reducing multiway races to straight two candidate contests.

But more is needed than an astute politician. The situation in Saskatchewan, and for that matter throughout the entire Dominion, constitutes a tremendous, almost made to order, opportunity for a leader of capacity, i. e., possessing both ability and character, to raise the banner of soundness and integrity—with none recognizable in the offing.

Should such a person arise amid the situation prevailing in Saskatchewan, committed not to a continuation of the great confidence game under different management as with our own Labor-Socialist Establishment, but to an exposure of the mess for what it is and a return to integrity, there is just no doubt whatsoever he would stand well above the multitude. Furthermore, a person of such stature conceivably could establish such a record for wise leadership among the many but undiscerned perils of statism that he might find his services in demand well beyond confines of the province.

Granting that the need seems not for just another politician thinking in terms of the next election, but for a statesman thinking in terms of the next and future generations, the prospect for significant improvement even with leadership of capacity is not exactly encouraging.

For in the face of Canada's long toleration of statism and related phenomena previously mentioned, a condition today paralleled in the United States as well, it may be necessary for the establishment of soundness in politico-economic affairs including medicine that first there must be significant attitude changes amounting to a spiritual revolution. Whether this is probable or even possible under prevailing conditions is something which only the passage of time will disclose. ■

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Pulmonary Physiology in Clinical Practice

VIb. Recognition and Treatment of Respiratory Failure

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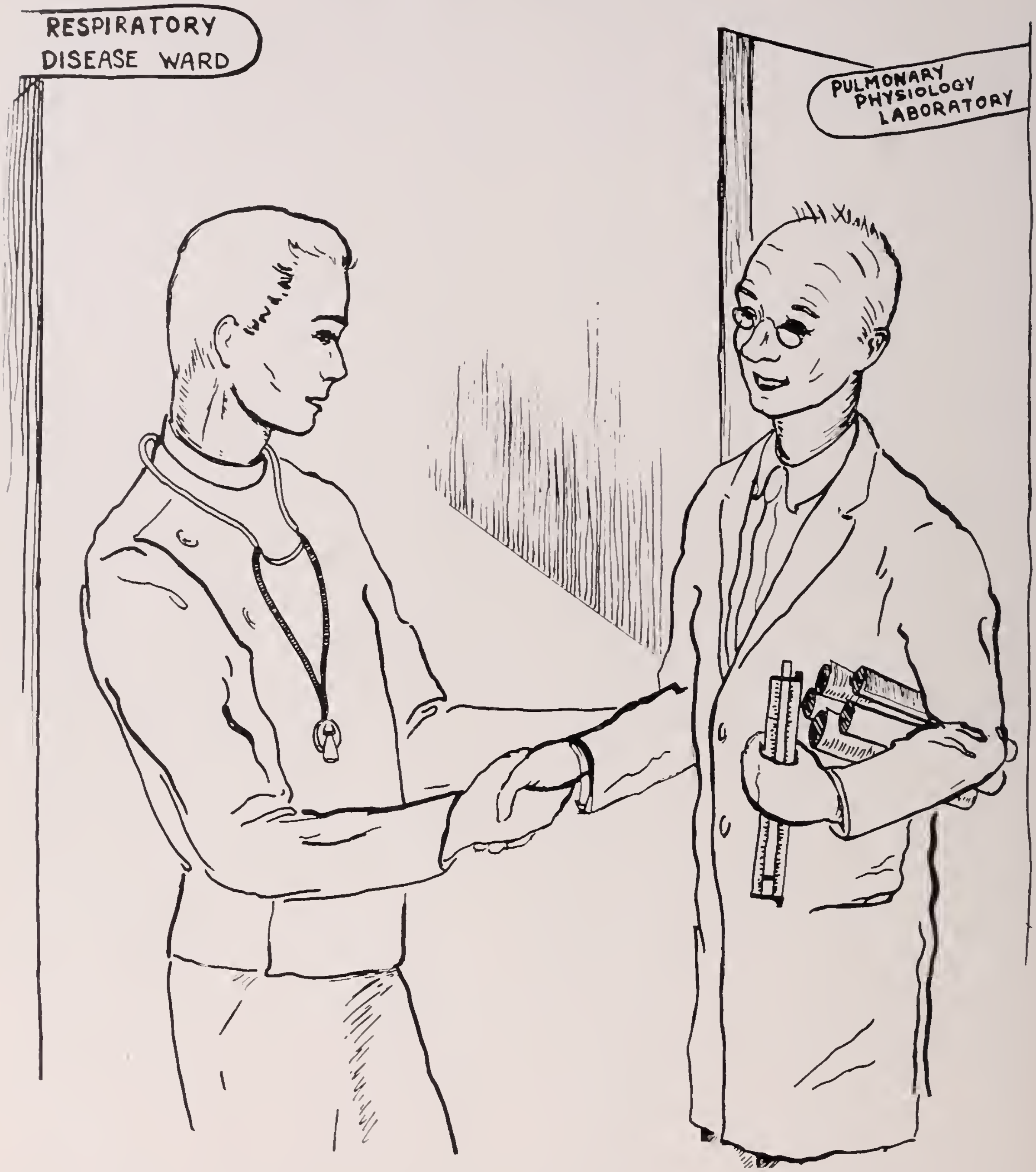

The use (and abuse) of intermittent positive pressure breathing (IPPB) devices for the treatment of both acute and chronic respiratory failure has become increasingly popular during the past few years.

It will be recalled that flow proceeds through a system of conduits from areas of higher pressure toward areas where the pressure is lower. The negative intrathoracic pressure produced by the expanding thorax during normal inspiration

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From the Cardio-Pulmonary Laboratory, Providence Hospital Heart Center, Seattle.

results in a pressure difference between the mouth and the alveolus which favors the flow of gases toward the latter. Since the factor governing direction and amount of flow is primarily the pressure *difference* (or *gradient*) between mouth and alveolus, it does not matter whether this difference is produced by lowering the intrathoracic pressure a few centimeters of H_2O, or raising the pressure at the mouth an equivalent amount; either will cause gas to flow toward the area of lower pressure until pressures at both ends of the system become equal. Conditions are of course reversed during expiration, when intrathoracic pressure is increased by recoil contraction of the lungs and thorax, and, in the case of IPPB, pressure at the mouth is lowered back to atmospheric level.

The invention of the IPPB principle in the treatment of acute respiratory failure perhaps preceded the dawn of written history; no one knows just when mouth-to-mouth resuscitation was first attempted. The automatic-cycling IPPB valve devices currently used in respiratory treatment have evolved for the most part from research done in the field of aviation medicine during and shortly following World War II.[1]

types of respirators

One of the first practical IPPB devices used clinically was the pneumatic balance resuscitator. This respirator, which was developed by the Army Air Force toward the end of World War II, was a small, compact instrument which employed pressure-sensitive, air-balanced valves to control cycling. It contained no springs, and its only moving parts were two rubber diaphragms.

The next few years saw numerous modifications.[2-6] Pressure-sensitive, spring-loaded valves were added. "Suck and blow"-type respirators were developed, which utilized a Venturi for negative pressure during expiration. Ultimately, respirators were produced which allow varying of line pressure, inspiratory and expiratory cycling rate, inspiratory and expiratory flow rates, and expiratory pressure, separately or in various combinations.

Many makes of IPPB respirators are available commercially for clinical use. Among the more popular of these are the Bird, the Bennett, and the Emerson. In my own experience I have found the Bird respirator to be a most useful and versatile instrument. With it, one may adjust flow rates and cycling sensitivities optimally to the individual patient. This very feature, however, constitutes one of its major liabilities when its usage with patients is not supervised by well trained personnel. Most staff nurses and ward aides are familiar with neither general principles of respiratory physiology nor specific details of operating respirator equipment. Particularly in the treatment of *chronic* respiratory failure, the use of this flexible instrument can be detrimental unless careful adjustment to the patient is constantly maintained. Another disadvantage of the Bird respirator is that it is priced considerably higher than some of the other available IPPB devices.

The body, or "tank" respirators (of the Drinker type) ventilate the patient by altering the pressure around the body rather than at the mouth. The pressure inside the tank, being transmitted across the thoracic wall, establishes a pressure difference between mouth and alveolus. This differs from the above-described IPPB devices only in that the pressure change is applied at the other end of the system. The major disadvantages of the tank-type respirator are its size, complexity, inconvenience of operation, expense, and total dependency on uninterrupted power source. Some of these disadvantages are reduced in the cuirass-type respirator, which, while employing the principles of the tank respirator, is designed to fit more conveniently, encompassing only the thorax and upper abdomen of the patient.

effect on cardiovascular system

In normal respiration, negative intrathoracic pressure during the inspiratory phase favors increased filling of the right heart and increased stroke volume during this interval. With positive pressure inspiration, however, this situation is reversed. In those patients whose circulation is already compromised the decrease in stroke volume during the inspiratory phase of IPPB may become critical. This deleterious effect may be compensated to some extent by adjusting the cycling to allow enough *expiratory time* for the cardiac output to catch up with any decrease it may suffer from the increased intrathoracic pressure during inspiration.

Under most conditions, the increase in right atrial pressure produced by IPPB causes a secondary rise in peripheral venous pressure which re-establishes the venous gradient and restores the rate of return of blood from the peripheral circulation to the heart. When sympathic pathways are inactivated (high spinal anesthesia, medication with ganglionic blocking drugs, etc.)

this increase in peripheral venous pressure may fail to occur. As a result, cardiac output may drop and arterial blood pressure may fall. Therefore, IPPB may be hazardous for patients in whom the responses of the sympathetic nervous system are impaired. The same danger exists for patients suffering from hemorrhagic shock, in whom the vasomotor compensatory mechanisms have already been maximally utilized.

in the apneic subject

Complete cessation of respiration presents probably the most dramatic and most important emergency ever to face the clinician. No matter what may be the precipitating cause of this state, ventilation must be restored in the apneic patient within minutes if he is to remain alive. This must be accomplished with whatever means are immediately at hand. Mouth-to-mouth resuscitation should be begun and continued until respirator equipment can be obtained.

Proper positioning of the head in relation to the body, for minimal resistance to pulmonary ventilation, is a most critical factor in resuscitating an apneic subject. The body should be flat, or in slight Trendelenburg, the head hyperextended, and the lower jaw supported from below. If at all possible, a cuffed endotrachial tube should be inserted; this makes possible effective ventilation with much lower pressures, while providing efficient access for sucking excess fluids and secretions from the airways.

The apneic subject should always be ventilated with 100 per cent oxygen if this is available. It is certainly unreasonable to be concerned at this stage about maintaining a partial degree of hypoxia in the forlorn hope that this may stimulate spontaneous ventilatory drive. It would be equally ridiculous to add 5 percent carbon dioxide to the breathing mixture (as has sometimes been done), in the specious belief that it will serve as a ventilatory stimulant. The apneic patient is already hypercarbic, and addition of CO_2 to the breathing mixture will only increase his acidosis.

It is also unlikely that one need be concerned about the danger of over-ventilating the patient suffering from acute respiratory failure with any of the commonly used IPPB respirators. Ventilatory rates of five to fifteen liters per minute should not effect enough change in pH and Pco_2 to produce any clinical sign of alkalosis. Studies have shown no evidence of acapnia or tetany even after hyperventilation at rates of more than 15 liters per minute.

It is important that the mask pressure curve (pressure applied at mouth level during inspiration) should increase gradually to a peak not higher than about 25 centimeters of water, and then drop rapidly after reversal. It is also important that the total inspiratory time not exceed the total expiratory time (during which no positive pressure is applied at the mouth), since this allows time for enough heartbeats of higher stroke volume during expiration to compensate for those of decreased stroke volume which occur during the positive pressure, inspiratory cycle.

A vital consideration in the use of intermittent positive pressure breathing for any condition is the maintenance of adequate moisture content of the gas mixture being blown into the airways. All personnel responsible for the management of patients using IPPB respirators should be constantly admonished to *never let the nebulizer run dry!*

IPPB in chronic respiratory failure

The basic principles described above for treatment of apneic patients are equally applicable to the use of IPPB therapy in certain chronic respiratory conditions.

In the treatment of chronic obstructive lung disease, IPPB has been found more effective in the early and moderately advanced stages when spasm and edema of the terminal bronchioles still predominate. In the end stages of diffuse obstructive pulmonary syndrome (DOPS), when there is loss of alveolar elasticity, rupture of the walls, and obliteration of the capillaries, frequent treatment with IPPB may be palliative, but its effect usually wears off after one to several hours. At this terminal stage of emphysematous disease, however, it does offer a safer, more efficient means of administering oxygen.

In treatment of chronic bronchiectasis, the beneficial results obtained from IPPB therapy are chiefly from promoting better bronchial drainage and expectoration of sputum. It can be a useful adjunct to postural drainage.

In patients with pneumoconiosis and pulmonary fibrosis from other causes, IPPB therapy has been found to produce striking improvement, both clinically and in findings on spirometric studies. It is most useful in these disorders if treatment is instituted before the development of extensive bullous emphysema. IPPB therapy has also been reported as being more helpful in treatment of cor pulmonale than any other method of treatment, with the possible exception of phlebotomy.

IPPB therapy is useful chiefly as an adjunct to other treatment in bronchial asthma. It provides a more effective means of administering bronchodilator aerosols. It does not, however, supplant other means of treatment, such as I-V fluids, iodides, epinephrin, steroids, etc.

use of IPPB for outpatient treatment

It is difficult to envision any chronic respiratory condition that would be greatly benefited from application of IPPB therapy less frequently than several times daily. For this reason, if for no other, it would seem that IPPB therapy for chronic respiratory disease can be most efficacious only when used by trained personnel in hospitals or similar inpatient institutions, or possibly in the patient's home.

therapeutic gases

Oxygen, helium, and carbon dioxide are the three gases commonly available for medical use.

Carbon dioxide is obtained in 5%, 7%, and 10% mixtures with oxygen. While in the past its use has sometimes been suggested as a respiratory stimulant, our present concepts lead us to believe that this gas is *never* indicated for inhalation therapy in respiratory failure. It is still sometimes used in the treatment of hiccups.

helium

Helium is commonly used in an 80% mixture combined with oxygen, on the theory that replacement of the nitrogen content of air with a light, inert gas will provide a gas mixture which may be transported through the airways with less ventilatory effort. Unfortunately, this thesis is only partially true. The resistance to flow of any gas through the airways depends upon two factors, weight and viscosity. While the helium-oxygen mixture is much lighter than air, its viscosity is actually greater. In those portions of the airways where flow is turbulent, the weight of the gas is the more important factor in determining resistance. Thus, in the upper airways (larynx, trachea, and mainstem bronchi) where turbulence is ordinarily present, the use of the helium-oxygen mixture may provide a decided advantage. In the more peripheral airways, however, helium offers no lesser resistance to the laminar flow of gases which is thought to occur at this area; in fact, its viscosity may even be slightly disadvantageous.

In some bronchospastic conditions (bronchial asthma) it is possible that air flowing past constricted areas in the smaller bronchi may become turbulent at this level. This may account for the clinical improvement which sometimes appears in patients with status asthmaticus when they are placed on helium-oxygen breathing mixtures.

One disadvantage encountered with helium-oxygen mixture breathing, however, is that it interferes with production of a strong, forceful cough. A strong and effectual cough can be best produced if the lungs are filled with a denser gas under pressure prior to its expulsion.

oxygen therapy

Breathing 100% oxygen (in normal subjects) raises the partial pressure of oxygen in the arterial blood to approximately 640 mm of mercury, as compared to a partial pressure of approximately 95 mm of mercury when the breathing mixture is atmospheric air. In patients who are unable to oxygenate their arterial blood while their alveoli are being ventilated with atmospheric air, oxygen inhalation may provide a means of correcting hypoxia.

In those patients with alveolar-capillary block (diffusion impairment), inhalation of oxygen-enriched breathing mixtures is the only means by which hypoxia can be corrected. Thus, oxygen inhalation may become an essential means of therapy (or even maintenance of life) for some patients in advanced stages of silicosis, byssinosis, asbestosis, thesaurosos, berylliosis, sarcoidosis, Hamman-Rich syndrome, and other pulmonary disorders which produce diffusion defects.

For patients suffering from right heart failure secondary to pulmonary disease (cor pulmonale), correction of hypoxia offers the two-fold advantage of reversing the polycythemia which is present and decreasing pulmonary hypertension by reflex effect on the pulmonary circulation.

It also enhances the effectiveness of digitalis, diuretics and salt restriction, and other measures used in the treatment of the cardiac failure.

Patients with severe, chronic pulmonary emphysema whose hypoxia limits their physical activity for a prolonged period of time commonly suffer from disuse atrophy of the musculoskeletal system. This in turn creates something of a vicious circle, with the increased muscular impairment further limiting their ability to ventilate their already hypoventilated lungs. Often, with an oxygen-enriched breathing mixture, these patients may be enabled to perform physical exercise which will help to restore their muscular structure and thereby improve their ventilatory defect.

Obviously, hypoxia from some causes cannot be greatly benefited by oxygen inhalation alone, and other measures are indicated. For example, inhaling 100% oxygen provides improvement for patients with arterio-venous shunts only by the minimal increase in oxygenation effected when additional oxygen dissolves in the plasma at the higher O_2 tension. Patients whose hypoxia is due to severe anemia may be improved to a measurable extent only by replacement of the hemoglobin in order that adequate amounts of oxygen may be transported to the tissues.

oxygen administration

The usual methods of administering oxygen are by the use of tents, catheters, cannulas, and masks.

The method chosen will depend in any particular case on the relative importance of four factors: 1) concentration of oxygen desired, 2) comfort of the patient, 3) complexity of administration, and 4) expense.

The oxygen tent still provides the most comfortable method of oxygen therapy. Temperature and humidity are controlled, and the patient is not disturbed or irritated by having anything in his nose or mouth or on his face. The oxygen tent, however, has the disadvantages of being the most expensive, the least efficient, and the most troublesome of all methods.

A nasal catheter provides a high oxygen concentration at low cost, and administration by this method is extremely simple. But most patients find this method extremely annoying. The use of the newer plastic nasal cannula finds considerably greater acceptance from patients, and is comparable to the catheter method in cost, ease of administration, and concentration of the gas delivered.

Several different masks have been designed for oxygen inhalation. These are either of the rebreathing or of the reservoir types. The reservoir mask has a valve between the mask proper and the reservoir bag, which allows gas to be drawn from the bag during inspiration but prevents any return of gas from mask to bag during expiration, and forces expired gas to be expelled through a flutter valve on the front of the mask.

The mask methods of administration are the most efficient from the standpoint of oxygen concentration delivered. Cost of using this method is comparable to the cannula and the catheter, and administration is not too difficult. Masks are poorly tolerated by patients, however, particularly when prolonged administration is required.

humidification

Continued inhalation of dry gases, in addition to being uncomfortable and irritating, is deleterious to the airways. In traversing the respiratory tubes, the dry gases extract moisture from the surface of the respiratory mucosa to become saturated. This leaves dry, thick, tenacious secretions, which obstruct the smaller airways and interfere with ventilation.

The "bubbling bottle" commonly used to "humidify" oxygen before its delivery to the patient is an ineffectual apparatus. More efficent is the heated, coiled tube, lined with a porous fabric which is kept constantly moistened with water. In this tube the dry gas from the tank source becomes saturated with water vapor as it passes through the coil before it is inhaled by the patient. "Fog"-producing devices have also proved effective. Nebulization, which was discussed earlier, with production of an aerosol mist, probably provides the most effective method of humidifying gases for inhalation treatment.

hazards of oxygen therapy

Reference has been made previously to the danger of respiratory suppression which may occur in patients suffering from hypercarbia, from breathing high concentrations of oxygen. Administration of oxygen by IPPB respirator will avoid this difficulty. The likelihood of this occurrence may also be decreased by using a lower concentration of oxygen (or delivering it to the patient through an open system at lower flow rates).

It is always wise to limit the increase in oxygen in the breathing mixture to that amount required to correct the arterial hypoxia which is present. Whenever possible in those patients requiring prolonged maintenance on O_2 therapy the optimal concentration should be determined by doing arterial blood gas studies, since there is no other way of knowing precisely when the arterial blood has become saturated with oxygen.

Other potential deleterious effects include the increased susceptibility to postoperative atelectasis of patients breathing oxygen, and retrolental fibroplasia in infants.

breathing exercises

Patients suffering from chronic obstructive bronchopulmonary disease may be able to improve the efficiency of their ventilation if they can be taught optimal utilization of their breathing mechanics.[7] This consists mainly of the patient's learning to make as much use as possible of his diaphragmatic muscles during inspiration and expiration.

It is helpful to suggest to the patient that he imagine he is filling his abdomen with each inspiration. He may also be asked to lie on his back, place a book on his adbomen, and try to make it rise as high as possible each time he inhales. He may also be taught to walk, stand, or sit in a leaning-forward position. Breathing with lips pursed during expiration will be found helpful; actually, most patients with chronic emphysema will have long since discovered this for themselves.

The use of an intermittent positive pressure breathing device may be a useful adjunct in teaching diaphragmatic breathing to the patient.

Numerous devices have been recommended for the improvement of breathing of patients with obstructive lung disease. This list includes such items of equipment as tilt-tables and -chairs, oscillating beds, and diaphragm-supporting belts.

head-down position

Barach and Beck have advocated placing patients with ventilatory impairment from pulmonary emphysema in a position with head tilted downward, the body lying at an angle 15 to 30 degrees from the horizontal.[8] Patients treated by this method reported striking relief of dyspnea, and this was accompanied by increased diaphragmatic excursion with breathing and a marked decrease in minute volume of ventilation. Sixty percent of these patients had an increased arterial oxygen saturation after 45 minutes.

The advantages obtained from this method of treatment apparently result from the increased efficiency of alveolar ventilation of the lower lobes as a result of the diaphragmatic breathing made possible by gravity pressure of the abdominal viscera on the diaphragm.

artificial pneumoperitoneum

The efficiency of diaphragmatic breathing may be improved by institution of artificial pneumoperitoneum. An investigation of pulmonary function in a group of patients so treated revealed striking clinical improvement in 40 percent, moderate improvement in 20 percent, and no improvement in 40 percent.[9] The clinical improvement was found associated with increased inspiratory capacity and maximal breathing capacity, and reduced residual volume, total lung capacity, and residual volume to total lung capacity ratio. In addition, those patients who experienced improvement also showed an increased arterial oxygen saturation and decreased CO_2 retention. Decreased cardiac output, varying from 10 to 30 percent, was reported in all patients.

tracheal fenestration

Tracheal fenestration is a surgically-produced, permanent opening in the trachea, covered by two overlapping lip-like flaps, which remain closed unless opened by the patient.[10] By opening the flaps the patient may aspirate his own tracheobronchial tree with a catheter.

With the osteum open approximately 50 to 60 ml of dead space is eliminated, theoretically increasing the efficiency of the alveolar ventilation. Some studies have indicated, however, that most patients merely decrease their tidal volume an amount equivalent to the eliminated dead space, leaving their effective alveolar ventilation at the same level.

Current opinion as to the efficacy of this procedure varies from enthusiasm to disappointment, and it is perhaps too early at this time to evaluate its usefullness in treatment of chronic respiratory disease.[11, 12]

ventilatory stimulants

Various drugs have been used as respiratory stimulants. None has been shown in the past to have a specific effect in driving ventilation.

During the past two years much interest has been evoked in the use of vanillic di-ethylamide (Emivan) in acute respiratory failure and CO_2 retention. While initial reports of the use of this drug are fairly enthusiastic, further evaluation is necessary before its true efficacy can be determined.[13-15]

other drugs

The judicious use of antibiotics is one of the most important factors in treatment of respiratory disease. Wherever possible, culture and sensitivity studies should be fully utilized to make antibiotic therapy specific for the offending pathogen.

Oral bronchodilators, iodides, and steroids have well established their usefullness in the treatment of obstructive bronchopulmonary disorders. Aminophylline is a clinically useful compound when administered orally, rectally, or intravenously.

Steroid therapy has proven valuable in many respiratory conditions in which an inflammatory process plays a part. This is particularly true in certain of the granulomatous lesions. In some cases, processes which have actually produced alveolar-capillary membrane thickening may be arrested and even reversed.

When cardiac decompensation from cor pulmonale enters the picture, digitalis and diuretics are indicated. Diamox, which has been frequently advocated as a useful drug in respiratory failure, is probably more useful for its diuretic effect than any effect it may have in eliminating carbon dioxide.

The small amount of space here apportioned to the drugs and medications used in treatment of respiratory failure is in no way intended to infer their lesser importance in the management of this problem. It is rather because of my feeling that the reader may be less familiar with those subjects considered in the preceding sections that I have dealt with them at so much greater length and detail.

conclusion

In concluding this series it is my sincere hope that the clinician reader may have discovered from these articles more common ground existing between himself and the pulmonary physiologist than he may have heretofore realized. I also hope that he will have found some of the matters he had considered complex to be simple, and some of the things he had previously felt to be of only academic interest to be practical and useful to him in his work. ■

951 Medical-Dental Building (1)

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General Considerations of a Medical Partnership

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Interns and residents occasionally launch their careers in medicine with uncertainties regarding group practice, and several of these young doctors have solicited advice from me during the past decade. Absence of personal experience made it difficult for me to offer valid suggestions, but this lack of first hand knowledge prompted me to collect information from others of experience. Valuable items considered in medical partnerships have been generously furnished to me by Justice Arno Denecke, Attorney A. L. Parks, and scores of colleagues. These include doctors who have enjoyed many years of satisfactory relationships as well as those who have endured unsuccessful partnership experiences, and their contributions allow this compilation.

The partners are joined to a common objective: first-rate medical care of the patient. And doctors would seem to agree that a smooth running partnership functions more effectively and provides better medical service. The quality of medicine is not enhanced when practice agreements break down, and oftimes these breakdowns may be avoided by more careful planning of the partnership.

The following comments and questions are tendered for consideration only, in the hope that they will be helpful in providing good medical care. May I emphasize that no uniformly right or wrong choice exists. For each individual situation only the partners have the answers best suited to their needs, but the following items may merit discussion by the doctors forming the partnership. Dispassionate and impersonal discussions that precede possible, future difficulties may produce better solutions than lengthy discussion of a problem after it has occurred.

implied partnerships

A medical partnership is an association of two or more doctors operating as co-owners of a medical practice for profit. The essential test of the existence of a partnership is the existence of an agreement between the individuals to act as partners; however, no formal agreement is required. A partnership may even be implied by the conduct of the doctors who control a particular practice. If, as a consequence of prior acts, the doctors have actually assumed this relationship in dealing with third parties, the law will treat them as partners despite the fact that they did not intend to enter into that relationship. Such an implication could be derived by doctors sharing in office expense but not the profits, by including both their names on letterheads or prescription blanks, or by referring habitually to each other as "my partner" even when unintended. A partnership has been declared to exist if the doctors act as principals in carrying on a mutual practice, if profits or losses are shared in some definite ratio, or if the doctors are co-owners of property acquired in the practice, such as office furniture or x-ray equipment.

legal partnership

The relationship of doctors as partners can easily be controlled and well defined by an agreement between themselves. In the absence of some definite agreement, the law will provide for certain definite relationships, such as equality in the sharing of profits and losses. Therefore it is not only desirable to establish the partnership arrangement in writing but probably unwise not to do so. The death of a partner automatically terminates an existing partnership, but this does not prevent the surviving partners from establishing a new partnership by a new agreement.

liability of partners

Since a partnership is not ordinarily regarded as an entity separate from the persons who compose it, each partner possesses the power to bind the firm and partners, and the partners are individually liable for any debts incurred by the group in the conduct of their partnership business. If one of the doctors purchases an expensive item of medical equipment and fails to pay for it, the equipment company could probably successfully maintain that the debt for this equipment is a debt of all doctors if they are regarded as partners.

military duty

Even during peace time, military service may interrupt a young physician's career, and the effect of voluntary or enforced military service may alter the terms of the partnership. Does the individual progress within the partnership during his absence for military duty? What effect does this absence have upon his receipts, salary, or his share of partnership expenses while he is in the military service?

specialty boards

Final certification by specialty boards for those individuals who have completed prescribed residency training does not usually occur until a period of practice has been completed. What effect does the procurement of anticipated board certification have on an individual's progression within the partnership and on his percentage of income? Is ultimate partnership status dependent upon board certification?

existing assets

When a new partner joins an existing partnership, are the existing accounts receivable and other assets included or excluded? If these assets are included, are they assigned at an equal or a percentage value? If it is necessary for the new partner to purchase his share of existing assets, is the "book value," the depreciated value, or the currently appraised value of equipment and other assets used in determining the new partner's obligation? At what time and by what method is the buying-in process instituted for the new partner?

liabilities

Is there a limit to the total indebtedness that may be incurred by any partner? Are the partnership liabilities and expenses pro-rated among the individuals within the partnership in the same manner as is the partnership income? What provisions exist in the case of bankruptcy of a partner or of the partnership itself?

withdrawal, expulsion, disolution

In the event that the partnership does not prove to be a satisfactory arrangement, is it possible to dissolve by a previously agreed upon manner that does not interfere with continuity of care for the patient? Is it possible for a partner to be expelled, and if so, by what means? In the event that expulsion is possible, how are his partnership interests disposed of, and how are the partnership assets redistributed? If a partner desires voluntary withdrawal from the partnership, can he participate by bid for certain assets of the partnership? Are geographic or other restrictions to practice included with the expulsion or withdrawal of a partner?

time on, time off

When does the work day begin and end? Is there a specified period of time off for vacations, medical meetings, special study, or postgraduate sessions? Is there a penalty for taking more than an agreed share of time off? How are the vacation periods assigned? Is time away for professional meetings considered separately or within the time alloted for vacations? Are expenditures incurred in attendance of professional meetings regarded as personal or partnership obligations?

disability

Illness or disability may involve any long time association of doctors. What arrangements are agreed upon between the partners if one should suffer a permanent, partial or total disability or contract a prolonged illness? At what time is an illness considered by the partnership to be prolonged or excessive? Are definite plans arranged for repeated illness? Should obligations of the partners to a disabled partner be funded by an insurance program?

retirement or death

Is there an agreed age and method of retirement, and if so what are the financial arrangements? What happens if a partner requests retirement in advance of an agreed plan? Is it possible for a partner to become voluntarily and partly retired? Should benefits for widows of deceased partners be provided for? Are financial arrangements for retirement or for widows' benefits funded by insurance?

summary

Again, the first purpose of a medical partnership is to provide high quality care for the individual patient. These several questions may be of value in the general consideration of a medical partnership, but the answers can be supplied only by the partners themselves. It should be emphasized that the efficacy of any agreement, whether written or oral, depends in huge measure upon the good faith of the parties. Therefore, the prime consideration for an effective partnership, not unlike marriage, is the singularly important choice of the individuals who make it up. Selection of an associate with whom one can work amicably and who is willing and competent to share, "for better or for worse", is the essential ingredient for any proposed medical partnership. ■

3181 S.W. Sam Jackson Park Road (1)

Air Embolism and Other Skin Diving Problems

C. A. KRUSE, M. D., Seattle, Washington

Decisions made within minutes, sometimes within seconds, may determine full recovery, permanent impairment, or death of the victim of a diving accident. Accidents will increase in frequency as the sport of skin diving grows in popularity.

Hazards associated with breathing air under increased pressure have been well understood by physicians whose patients were caisson workers or professional divers. Others have had little need for special information but this is no longer true. The physician who has recognized only problems from water depth no greater than that in his bathtub may suddenly be confronted with a compression-decompression emergency. He will have to act without hesitation.

definitions

In order to eliminate a formal glossary, practical definitions of the terms applied to skin diving activities are given below:

1. Skin-diving is underwater diving (most often coupled with surface swimming), using a snorkel device, and a face mask for better visibility. Perhaps the diver may wear a neoprene suit for warmth.
2. Scuba diving requires a specific kind of apparatus that enables the diver to remain below the surface by utilizing a tank of compressed air.
3. Scuba is a convenient term derived from the words *Self Contained Underwater Breathing Apparatus.*

The term *skin diving* as used by almost all divers generally means any form of underwater activity as mentioned above.

problems

Most medical problems that occur in skin diving, as technically defined, are neither numerically nor pathologically as important as in scuba-diving. The problems to be discussed herein are mostly those which evolve from scuba-diving.

The three most clinically serious problems are, 1. air embolism, 2. the bends (caisson workers' disease), 3. exhaustion.

A fourth problem, nebulous and unpredictable, is panic. It may be the onslaught of overwhelming or unexpected fear of the water. It can be constriction of the face, neck and chest, caused by the neoprene suit, tank harness, or mask that leads to or induces panic. Sudden fear or panic is a precursor of many serious accidents in diving.

Air embolism, as a phenomenon in diving, is strictly one of physical disruption caused by air under high pressure distending the pulmonary alveoli. This results in the tearing of alveolar structures. Following this, air enters the blood stream and occludes vessels in the heart and the brain. This is a formidable and serious problem and must be handled with alacrity.

The hazard of the bends is better known and understood, since the phenomenon is based upon the concentration of nitrogen in the blood stream to the point where the partial pressure becomes intolerable to certain tissues.

Exhaustion is a problem in the chemistry of overwhelming muscular fatigue and the inability of these tissues to regain their previously efficient function with sufficient rapidity.

The problem of sudden fear or panic is obviously psychological in origin, however, it may derive from some minor or major physical discomfort of the moment.

scuba

The diver usually carries one or more tanks of compressed air. A tank may be four to eight inches in diameter and 15 to 23 inches in length. It is made under rigid specifications such as those applying to oxygen tanks or other gas tanks of an anesthetic machine. It will hold about 1,800 to 2,800 pounds of air per square inch (40 to 72 cubic feet is equilvalent at these pressures).

The next mechanism of importance is that known as the regulator. This is a device that is fastened to the valve of the tank and possesses either one or two hoses. These curve over the shoulders and fasten to a special mouth piece which fits between the teeth and the gums and is gripped by the jaws. This effects a seal against the pressure of the water while allowing the diver to breathe through his mouth. The regulator is the most important component of the scuba apparatus.

It is by this device that a diver, when inspiring, *will receive the exact amount of air required to equalize the pressure in his lungs with that of the water pressure against his body.* This cleverly designed mechanism enables the diver to breathe with complete ease when at moderate (40 to 70 feet) or greater depth.

The face mask is a piece of tempered safety glass, either curved bilaterally or flat, and circular, and enclosed at it's perimeter with a rubber seal, molded to fit the facial contour. Entrance of water into the mask is prevented by the rubber seal. The mask itself permits excellent visibility during diving.

recompression

Treatment of the bends is, specifically, recompression. The patient must necessarily be transported to a recompression chamber and properly recompressed and then decompressed slowly. There is no other satisfactory treatment for the acute bends. This, of course, poses a problem to almost any physician when he is confronted with the knowledge that a patient is being brought to the office or hospital with, perhaps, a first aid diagnosis of "bends".

Obviously, if the patient is suffering from the bends, the physician must know where the recompression chambers are available.

According to the latest information, in the greater Seattle area there are available seven recompression chambers. Only five are available currently because of limited number of qualified operators. These chambers are at the United States Naval Torpedo Station at Keyport, Washington. The station is reached by telephone through the Puget Sound Naval Shipyard at Bremerton, telephone, (206) 373 5011.

Available in Spokane, Washington is one double lock recompression chamber operated by a qualified individual. The address here is Bill Harris Divers, North 422 Raymond, Spokane 62, Washington; telephone (509) 926 8197.

The medical officer at the Naval Torpedo Station offers the following suggestions on transportation:

1. If the patient is from 1 to 1 1/2 hours driving distance from the chamber, it is probably better to transport him by car or ambulance.

2. Helicopters may be utilized when other transportation will require too much time or the accident scene is inaccessible. Some private service may be available but most emergencies are covered by the military services. Helicopters are maintained by the Coast Guard, the Navy and the Air Force. The Coast Guard is responsible for search and rescue operations in most of the maritime area with 13th District Headquarters at Seattle. The Air Force covers most emergencies in the inland areas. The Coast Guard Search and Rescue Service Coordination Center in Seattle will probably either assume responsibility or relay the call when asked for help in emergency. The telephone number is (206) 624 2902.

3. Washington State Patrol has no helicopters, but if escorted transportation is needed a physician may call the nearest district headquarters for trooper escort.

If a physician in the Seattle area is willing to accept the first-aid diagnosis of the bends and decides to put into action one or more of the facilities described above, this information will suffice. Thus a patient with the bends (if acquired in Western Washington waters) should be transported to the United States Naval Torpedo Station at Keyport for proper recompression.

There are no operable recompression chambers under Naval jurisdiction in the states of Oregon or Idaho. The above facts were received from the Public Information Officer at the 13th Naval District Headquarters.

air embolism

The first aid diagnosis of air embolism presents a more troublesome problem. Such cases may be hemiplegic at the time of surfacing. This type of accident can occur after dives to almost any depth. It has been observed after descent as shallow as five or six feet.

If air embolism occurs, it may go unnoticed for a few minutes, even within a diving group or with a pair of divers who are slightly separated. An experienced diver may not recognize at once that his friend or pupil is not functioning correctly.

When this situation occurs, first aid measures are unfortunately limited and the patient will often be en route to the hospital, or a doctor's office, before the doctor is advised of the emergency.

Treatment of air embolism is within the same category as the bends. The ideal and absolute treatment for this is recompression. *This cannot be overemphasized.*

As mentioned previously air embolism begins by rapid increase of intrapulmonary pressure in relation to decrease of extrathoracic pressure (under water pressure). This occurs only when the diver, knowingly or not, retains air inspired under pressure at depth and ascends without expiring in order to equalize intrapulmonary pressure with extrathoracic pressure. If the increase of intra-alveolar pressure is sufficient, rupture of some alveoli can occur.

The areas involving such rupture are often peripheral, but they can be at any place where the intrapulmonary pressure rises sufficiently so that the alveoli are torn. Collapse of the lung is not necessarily concommitant.

improvised treatment

My personal experience with a case of air embolism occurred not too long ago with a man in his early thirties. He was completing a course in diving instruction. In a training tank, he had completed the first part of a maneuver known as "ditching." This maneuver involves descending to the bottom of the tank, removing equipment, surfacing, returning to the bottom, and replacing all equipment. Face mask, tanks, regulator, and weight belt are removed, a last breath is taken from the mouth piece, and the student ascends. The only danger is in the ascent. It demands exhalation to reduce intrapulmonary pressure as extrathoracic pressure diminishes.

This man was considered an apt and quick pupil. He was muscular, with good reflexes, and was considered to be ready for qualification as a competent diver. However, either forgetfulness, enthusiasm, or ebullience in accomplishing this difficult procedure of ditching clouded *his newly achieved discipline of expelling his breath upon ascent*. He failed to expel the air, and upon surfacing at the top of the tank he was hemiplegic and comatose.

He was transported to my office within 15 minutes of surfacing time. He was still hemiplegic and semi-comatose. Diagnosis of air embolism was made on the basis of the history supplied by the accompanying diving instructor.

There was no time for study but this was less important, as I discovered later, than it seemed then. Literature on first aid treatment of air embolism is practically non-existent. At that time, I did not even know the location of recompression chambers. Treatment was improvised and the course I followed was developed out of circumstances.

The men who brought the patient were not trained ambulance attendants and their handling was awkward. In lifting him to the examining table, they permitted rather marked flexion of the lower extremities and the neck. As his trunk sagged and his head was brought forward, I noted some twitching of the paralyzed side of the face and barely perceptible motion of the affected arm.

By chance, rather than by intent, the table used was one with tilt control permitting fairly rapid change of angle. This fact and the observation of some change induced by altering position made it seem reasonable to start an oscillating movement of the table while the patient was supine, with the head brought forward as it had been while he was being lifted.

oscillation

The table was put into about 15 degrees Trendelenburg position and then, as rapidly as possible, returned to horizontal. This was repeated, the cycles being completed in about 45 seconds.

Some response was noted almost immediately. As result of this encouragement, the oscillation treatment was continued for at least 15 minutes. He soon began to show evidence of control of facial muscles and began to talk. He was able to report return of sensation to the arm and leg and some motion was possible.

He was kept in supine position for two hours, during which time there was enough improvement to permit locomotion. He was allowed to go home since he refused to be hospitalized. During the next few days he reported several times a day. Recovery was complete.

There is, at present, no way to evaluate the method used. At least it seemed to do no harm. It is not being recommended. It has, however, stimulated a research project at the University of Washington School of Medicine. Until more is known about the entire subject of air embolism and the possibilities of new methods, *the proper treatment of this entity is recompression.*

recompression and decompression

The terms, *recompression* and *decompression* are often used interchangeably. Recompression subjects the patient to pressure as great or greater than that experienced prior to the accident. Decompression is slow reduction of chamber pressure to one atmosphere. Recompression must be at pressure equal to no less than that at 130 to 160 feet depth in water, about three atmospheres. This can be accomplished with air, in a very strong, sealed tank. The air having flowed into the tank under controlled pressure is, in effect, the same as water surrounding the victim. Also present is the added convenience of the victim being able to breathe without special apparatus. Physiologically, this is identical to the situation beneath the surface of the water.

Decompression is a necessity when a diver goes to certain depths for prolonged periods of time. Decompression is a requirement, that if not properly performed, can mean permanent disability, or even death. Proper decompression, unfortunately, is not always practised by divers. This occurs mostly because divers who go to excessive depths for prolonged periods of time may not decompress properly during ascent.

If delay that requires decompression occurs, divers may not have secondary sets of apparatus at their disposal, such as extra scuba tanks properly fastened to an anchor line at the proper depth. Often these extra tanks are in a boat floating on the surface.

This exposes a diver to the bends, if he tries to buy more time under water at the expense of surfacing too quickly to obtain the tank. He may have trouble even though he returns promptly to an otherwise safe decompression depth.

prevention

As with many problems in medicine, the best treatment is the avoidance of the problem entirely. Under-water decompression that follows initial compression is the best. But, proper decompression procedure is not always followed.

The Bureau of Medicine and Surgery of the Department of the Navy issues a manual entitled Submarine Medicine Practise. It contains discussions of the current status of decompression techniques in scuba (the Navy chooses to use the term "air scuba" as opposed to oxygen rebreathing apparatus).

In chapter thirteen, in italics, the following is noted: *"For normal air-scuba diving a maximum depth limit of 130 feet should be recognized."*

Numerous comments have been brought forth by scuba and skin divers who present certified courses in diving pertaining to the physical examination that many of these instructors ask of their pupils.

physical status

It is clear that good physical condition is mandatory for participation, but physicians are frequently prone to perform an examination that may not satisfy an instructor. Many certified instructors give the pupil a form to be filled out by the physician indicating certain anatomic areas for remarks. This, of course, is much more convenient for the physician, but the expected increase in diving enthusiasts this year, and in the years to follow, undoubtedly will bring about the need for more careful evaluation of potential diving pupils.

Specific problems that may exclude a pupil from diving instruction are obesity, metabolic diseases, poor muscle tone, epilepsy, pulmonary diseases, or cardiac disability. Certain static disabilities such as crippled or missing limbs should, in the words of a prominent diving instructor in Seattle, "be looked at but not down on." Many divers have observed, on occasion, a man with one lower extremity who handles himself quite well in the water. Deafness or perforated eardrums do not necessarily mean total restriction.

The physician may be somewhat concerned if his decision were to be based only upon the age of a person in his late 40's or early 50's. This again is a matter of clinical judgement. It is known that a number of people in their late 50's and early 60's are competent divers. Of course, a complete physical work-up, including electrocardiogram, chest x-ray, spirometry, etc. would be the ideal of standard physical examination for these participants but, by and large, most younger pupils will not need all of these procedures.

Another facet of the skin diving problem is that of the psychological aspect, touched upon in an earlier paragraph. Further detail is warranted.

personality inventory

A very interesting and provocative, unpublished paper* lists some astute questions pertaining to the psychological, or psychopathic, aspects of diving. The author states that "emotional stability (of skin divers) has been left largely untouched. Review of the fatalities that lack evidence of mechanical failure and leave the suggestion that human error is the cause of the accident bear this out. However, it is possible that this lack of emotional stability at the moment of crisis is a point of critical concern. The solution is not as simple as training and diving experience that may build competence and this offers some answer to the problem."

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*Murray, D. H., Are medical examinations for skin and scuba divers adequate? Personal communication, Seattle, 1963.

Mr. Murray mentioned that insurance company files reveal interesting patterns of accident proneness.

"What causes accident proneness? Contributory factors might include the lack of awareness of environment, the proper reaction to other people, an imbalance between muscular and neurologic systems. Closely related to accident proneness is panic proneness. We have seen the individual who reacts to a situation by failing to utilize information and training. The question here is why one person reacts more or less properly and the other, with similar training, improperly? Many instructors have included panic training to provide opportunity to measure reaction to the unexpected. This has not been the solution, because we will find divers forgetting their training when faced with an unusual situation."

Mr. Murray has devised ten questions that he feels may be useful for the evaluation of emotional stability in prospective diving pupils. They are:

1. How many broken bones have you had in the last 5 years?
2. Are you afraid of closed in spaces?
3. Are you afraid of high places?
4. Do you tend to "freeze" when confronted with anything unexpected?
5. How many moving traffic violations have you had in the last 3 years?
6. How many athletic injuries have you had?
7. Does darkness frighten you?
8. Did you have more than the normal number of childhood injuries, such as falling from trees, a bicycle, swings, etc.?
9. Do you feel a sense of responsibility for other people?
10. Do you depend upon others to do things for you?

I should like to quote Mr. Murray's closing paragraph: "In a field as new as skin and scuba diving we find practise ahead of theory and the test before the lesson. First inspection suggests no place to turn first for an answer to the problems, but the collective thinking, experimentation, and documentation will provide answers to patterns of safe diving." ■

120 Northgate Plaza (55)

abstract

Most serious clinical problems arising from skin and scuba diving are air embolism, the bends, and exhaustion. Panic is a precursor of many serious accidents. Air embolism occurs through alveolar disruption when the diver fails to exhale during ascent from depth. A diver may suffer the bends if he ascends too rapidly after a prolonged stay at depth. Recompression followed by slow decompression is the correct treatment for either condition. The author treated one case of air embolism by the equivalent of an oscillating bed. Result was complete recovery but the method is not recommended. Research on the entire problem of air embolism is under way. Prospective divers should be screened by careful physical examination plus brief inquiry into emotional status.

abstracto

Los mas serios problemas clínicos que resultan del buceo (con tanques de oxígeno y, sin ellos) son; Embolismo de aire, la ligazón ("the bends") y el agotamiento. Pánico es el precursor de muchos accidentes serios. Embolismo de aire ocurre como resultado de rotura alveolar cuando el individuo defa de expirar durante el ascenso. El buzo puede contraer "the bends" si sube rapidamente despues de haber permanecido por un tiempo mas o menos largo y a una profundidad suficiente. Recompresión seguida de gradual decompresión es el tratamiento correcto para las dos condiciones. El autor trató un caso de embolismo de aire usando una forma modificada de "cama oscilante". El resultado fue recuperación completa, sin embargo, éste método no se recomienda. La investigación del problema de embolismo de aire se esta llevando a cabo. Los buzos en perspectiva deberán pasar un cuidadoso exámen médico y un breve examen psicologicó.

Transurethral Resection of Larger Prostates

LOUIS J. SCHEINMAN, M.D. Seattle, Washington

Transurethral prostatectomy has certain advantages over all other surgical techniques for removal of the benignly hypertrophied gland:

1. Primarily, it is a more complete operation and should be called a prostatectomy because it permits removal of the compressed rim of normal tissue, from which recurrences can occur, as well as all adenomatous tissue. Open enucleation is accomplished by entering a plane of cleavage between normal and adenomatous tissue. Only the adenomatous portion is removed. Both operations are actually subtotal.
2. The procedure may be discontinued at any time.
3. Bleeding vessels are directly viewed and fulgurated. This is the only operative method that permits visualization of the channel (both preoperatively and postoperatively) through which the patient will urinate.
4. There is little or no shock in this method of removal, compared with the trauma of enucleation. Transurethral prostatectomy can be used for bad risk patients who would otherwise be consigned to permanent catheter drainage.
5. A lower level of anesthesia is required.
6. Postoperative pain is generally less severe and epididymitis is a less frequent occurrence.
7. Early ambulation is the rule, and there is a shorter period of indwelling catheterization.
8. Postoperative hospitalization is considerably shorter.

disadvantages

Major disadvantage of this operation is the degree of skill required to do it. Open prostatectomy can be mastered after performance of a dozen but even after 500 resections, technique can be improved. Some operators just do not have the required mechanical dexterity or monocular appreciation of depth to perform a good transurethral prostatectomy, if the gland is large. Smaller glands are less of a challenge. Each urologist must decide his own limits.

The complication of hemolysis may be minimized by low water pressure, use of isotonic irrigation solution, and shortened operating time. Intravenous mannitol may be used to produce diuresis which aids in preventing tubular block by hemoglobin casts.

Dilutional hyponatremia may be prevented by use of intravenous hypertonic sodium lactate during surgery, insistence upon low water pressure, and by deferring resection of deeper tissues that contain venous sinuses. These areas should be the last to be removed.

Meatal stricture may be avoided by ample meatotomy with hygienic attention directed to this area during the postoperative period.

experience, 532 cases

In a personal series of 532 consecutive transurethral prostatectomies performed from July 1, 1951, to May 31, 1963, there were 152 glands weighing 30 gm or more. The heaviest of these weighed 121 gm and 63 weighed more than 50 gm.

Postoperative hospitalization of these 152 cases averaged less than six days, a significant statistic when compared with similar groups of patients operated upon by any of the open methods, (no postoperative hospital period of less than 10 days could be found in the literature).

Savings due to shortened hospital stay and the fact that a surgical assistant is not needed are substantial. I have estimated that these two items alone reduce total cost to the patient (or to the prepayment plan) by at least $250.

retention and mortality

Pulmonary embolism remains as a major cause of postoperative death after others have been reduced by antibiotics, better understanding of fluid balance, improved anesthesia, and more effective use of transfusion. Five of the seven deaths in this series of 532 cases were due to pulmonary embolism and all five were cases with retention when first referred. The one death from coronary occlusion was also in retention when first seen. These occurred in spite of the fact that all were given an adequate period of drainage prior to surgery.

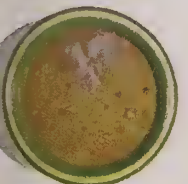
Pelvic circulatory stasis must certainly occur in the presence of a bladder distended for any length of time, predisposing to thrombosis. Definitive attention earlier in the progress of prostatic hypertrophy would conceivably reduce postoperative mortality due to pulmonary embolism.

Weight of glands
152 cases with prostates weighing 30 grams or more

Weight gm	Cases	Weight gm	Cases
30-34	38	75-79	5
35-39	25	80-84	2
40-44	13	85-89	1
45-49	14	90-94	2
50-54	19	95-99	1
55-59	6	100-104	1
60-64	8	105-109	0
65-69	7	110-121	2
70-74	8		

626 Stimson Bldg. (1)

How many make a bowl of soup, Doctor?



Naturally, the number of beans, peas or lentils that go into a bowl of Campbell's soup will depend on the variety of soup and on what our experience and our chefs tell us should be in the soup.

But you can be sure of one thing: every bowl of Campbell's soup made with the legumes you see in our picture, will be nutritious and of course delicious.

We think you'd enjoy Campbell's Bean with Bacon Soup, Green Pea, Black Bean, Minestrone, or Vegetable Bean Soup. Certainly, your patients would, too . . . and if you can get a patient to enjoy the food he needs to eat, he'll be more likely to stick to the diet you prescribe.

But when you plan diets for patients, don't take time to count the beans. Instead, you can count the calories or grams of protein in these soups. You'll see at once that several of our soups would be very desirable to use if you have a patient who needs to put on weight. Bean with Bacon Soup, for instance, contains about 133 calories and 6.8 grams of protein in a 7 oz. serving; and Chili Beef Soup, about 131 calories and 6.2 grams of protein.

At the other end of the scale, many of Campbell's Soups are good to use if you want to give a patient something satisfying but with fewer calories. Vegetable Bean has about 82 calories and 4.4 grams of protein; Minestrone only 83 calories and about 4.9 grams of protein per 7 oz. serving.

We feel you'd be interested in the new series of nutritional analyses of all our different soups. Write today for your copy: Campbell Soup Company, Dept. 87, Camden, New Jersey.

Recommend Campbell's Soups to your patients . . . and, of course, enjoy them yourself. There's a soup for almost every patient and diet, for every meal.

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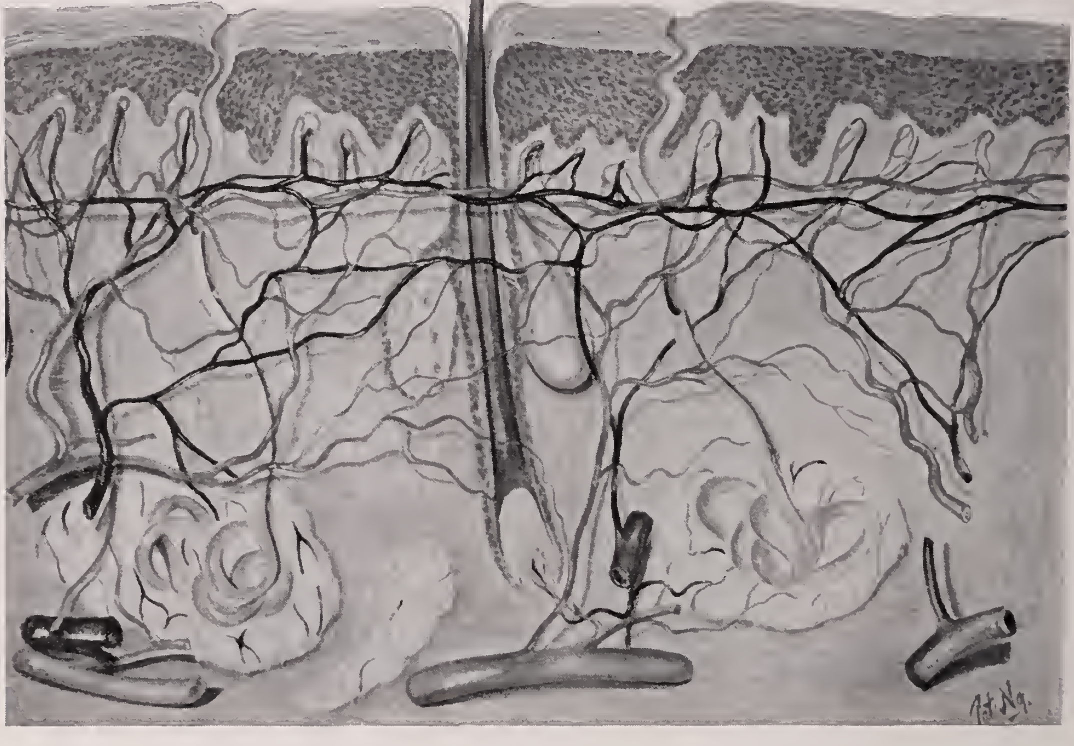

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Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs.

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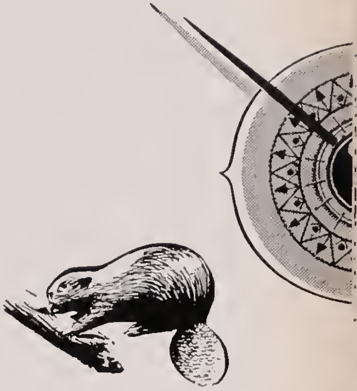

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The annual John Tomlin Memorial Cancer Lectures will be held August 16 and 17 at the Rogue Valley Country Club, Medford. Speakers will be: Edward C. Hill, Assistant Professor of Obstetrics and Gynecology, University of California Medical School; Chief, Gynecologic Tumor Service, University of California Hospital. Milton D. Hyman, Assistant Clinical Professor of Radiology, University of Oregon Medical School. Donald G. McKay, Delafield Professor of Pathology; Chairman of Department College of Physicians and Surgeons of Columbia University. Howard C. Stearns, Clinical Professor of Obstetrics and Gynecology, University of Oregon Medical School. James M. Whitely, Clinical Instructor in Obstetrics and Gynecology, University of Oregon Medical School.

PROGRAM
August 16

1:30 p.m. Pathology of Trophoblast
Donald G. McKay, M.D.
2:15 p.m. Malignancy of the Endometrium
Edward C. Hill, M.D.
3:15 p.m. Pathology of Carcinoma of Cervix
Donald G. McKay, M.D.
4:00 p.m. Treatment of Carcinoma of Cervix
Edward C. Hill, M.D.
4:45 p.m. Panel Discussion on Determination of Radiosensitivity in Carcinoma of the Cervix
Howard C. Stearns, M.D.
Donald G. McKay, M.D.
Edward C. Hill, M.D.
Milton D. Hyman, M.D.

August 17

9:30 a.m. Role of Supervoltage Therapy in Gynecologic Cancer
Milton D. Hyman, M.D.
10:15 a.m. Pathology of Carcinoma of the Ovary
Donald G. McKay, M.D.
11:15 a.m. Panel Discussion on Treatment of Ovarian Tumor Malignancy
James M. Whitely, M.D.
Donald G. McKay, M.D.
Edward C. Hill, M.D.
Milton D. Hyman, M.D.

Honored staff member at University of Oregon

J. Englebert Dunphy, chairman of the Department of Surgery at the University of Oregon Medical School, has been named an Honorary Fellow in the Royal College of Surgeons of England. Last year he was named an Honorary Fellow in the Association of Surgeons of Great Britain and Ireland. Last month, members of the graduating class of the University of Oregon Medical School gave him the Allan J. Hill Award as outstanding teacher of the year.

Dr. Dunphy is president-elect of the American College of Surgeons and past-president of the Society of University Surgeons, the American Surgical Association and the American College of Surgeons and past chairman of the American Board of Surgery.

SAMA officers named

Robert O. Voy, a 29 year old junior at the University of Oregon Medical School, was elected President of the Student American Medical Association for the 1963-1964 term on May 5. Edward A. Barker, Junior at the University of Washington School of Medicine was named Regional Vice President.

Proceedings of the board of trustees

The regular monthly meeting of the Board of Trustees of the Oregon State Medical Society was held on Saturday, June 8, 1963 at 2:00 P.M. in the Conference Room of the Society headquarters office in Portland.

The following members of the Board were present: Melvin W. Breese, Daniel K. Billmeyer, Ernest T. Livingstone, James H. Seacat, Blair J. Henningsgaard, Max H. Parrott, John W. Stephens, James V. Woodworth, Alfred C. Hutchinson, J. Scott Gardner, Otto C. Page, Merle Pennington, Noel B. Rawls, George J. Schunk, William C. Crothers, John L. Lang, Leonard D. Jacobson, John E. Tysell, Melvin E. Johnson, Beverly A. Cope, Paul W. Sharp, W. T. Edmundson and Donald F. Campbell.

The following members of the Board were absent: Glenn M. Gordon, Raymond M. McKeown, H. D. Colver, W. O. Steele, Lorance B. Evers and Joseph P. Frederick.

Other members of the Society in attendance were: Russel L. Baker, Chairman, Board of Trustees of Oregon Physicians' Service; Herman A. Dickel, Chairman, Committee on Medical Education; Richard E. Markley, Chairman, Committee on Conservation of Vision; Clinton S. McGill, Chairman, Committee on Public Policy; and Edward E. Rosenbaum, Chairman, Committee on Aging. Likewise present were Mrs. J. Cliffton Massar and Mrs. Guy R. McCutcheon, President and President-Elect respectively of the Woman's Auxiliary; Mr. Robert O. Voy, President of the Student American Medical Association and Mrs. Voy; and Mr. Peter Bergreen, Vice-President, University of Oregon Chapter, Student American Medical Association.

Also present were Mr. John J. Coughlin, legal counsel; Mr. Roscoe K. Miller, executive secretary; Mr. Robert O. Bissell, associate executive secretary; and Mr. Robert H. Elsner, executive secretary, Multnomah County Medical Society.

Upon motion duly made, seconded and carried, it was voted to dispense with the reading of the proceedings of the meeting on Saturday, April 6, 1963, and to adopt them as previously submitted to the members of the Board of Trustees in multilith form.

Upon motion duly made, seconded and carried, it was voted to accept the monthly financial statement of the Secretary-Treasurer.

The Secretary-Treasurer read a letter from Mrs. John Pompelli, wife of the Field Representative of the American Medical Association serving Oregon, expressing her appreciation for the myrtlewood tray sent to her by the Society and the Woman's Auxiliary at the time of her recent serious illness.

President Breese presented the following recommendations of the Executive Committee:

1. With respect to correspondence:

   a. That the application of the Oregon Chapter of the American Academy of Pediatrics for the establishment of a scientific section on pediatrics in the Oregon State Medical Society be referred to the Committee on Revision of Bylaws.

   b. That the request of J. Oppie McCall, Portland that the Society recognize the Planned Parenthood Association of Oregon and its purposes be approved and that Dr. McCall be named as the Society's official representative on the Association's Medical Advisory Committee.

2. That the following applications for Life and Emeritus membership, being approved by their respective component societies, be approved.

   A. G. Bettman, Portland - Life membership
   H. R. Shields, Portland - Active Emeritus membership
   Edward J. Hall, Astoria - Active Emeritus membership

3. That the President be authorized to appoint a special committee to survey and make recommendations regarding the Portland General Hospital in accordance with a request of that institution's Board of Trustees.

4. That a committee composed of Paul W. Sharp, John E. Tysell and Melvin W. Breese be appointed

to determine what members of the Society and outstanding citizens of Oregon should receive special recognition at the Society's Annual Banquet.

5. That the Committee on Revision of Bylaws be directed to study the Society's Committee structure under the direction of Dr. Billmeyer, President-Elect.

6. That the following resolution commending the American Farm Bureau Federation be adopted:

WHEREAS, the Executive Branch of the United States Government offered to the Nation's wheat farmers a proposal which would have given the federal government broad powers to regulate and control the production and price of wheat; and,

WHEREAS, the proposed controls would have so dominated wheat farmers that the traditional freedoms desired and enjoyed by those engaged in this industry would have been seriously endangered; and,

WHEREAS, the nation's wheat farmers in a referendum conducted by the federal department of Agriculture on May 21, 1963 overwhelmingly rejected the proposal; and,

WHEREAS, the American Farm Bureau Federation assumed a bold role of leadership in opposing the proposal by fearlessly emphasizing the permanency of such controls and restrictive regulations if implemented; and,

WHEREAS, the American Farm Bureau Federation has likewise been a vigorous opponent of unwarranted government regulation and interference in industry and the professions generally; now therefore be it

RESOLVED, that the Oregon State Medical Society does hereby congratulate and highly commend the American Farm Bureau Federation and its State constituents for their unalterable opposition to the extension of government controls in agriculture and to government encroachment in business, industry and the professions; and be it further

RESOLVED, that a copy of this resolution be sent to Oregon Farm Bureau Federation, the participants in the Conference of Business, Industry, Professions and Agriculture, the Oregon delegation in Congress, and the American Medical Association.

7. That the following resolution expressing the Society's disapproval of S. 533 relating to the humane treatment of animals used in experiments and tests be adopted:

WHEREAS, S. 533 providing for the humane treatment of vertebrate animals used in experiments and tests by recipients of grants from agencies of the federal government has been introduced by Senators Maurine Neuberger of Oregon and Joseph Clark of Pennsylvania; and,

WHEREAS, some of the regulations which would be imposed under this bill would seriously limit the exercise of scientific and professional judgment; and,

WHEREAS, the philosophy expressed in the bill appears to be based upon implied assumptions that biomedical investigators operate without moral or ethical standards in the care and use of living animals in the conduct of experiments; and,

WHEREAS, this implied assumption is contrary to fact as demonstrated by the professional societies which have formulated codes of ethics for the guidance of their members in the conduct of biomedical investigations utilizing experi-animals; and,

WHEREAS, the provisions of the bill are oriented in retrospect and do not reflect an appreciation of the rapid changes and improvements in the care and utilization of living experimental animals in biomedical investigations; and,

WHEREAS, the provisions of this bill if enacted would increase the costs of biomedical investigations and would discourage the continued advancement of medical science through such investigations; and,

WHEREAS, careful studies involving the utilization of experimental animals have been and are responsible for nearly all progress in animal husbandry and veterinary medicine; and,

WHEREAS, it is an historical fact that similar studies of animals have provided to scientists working on human disease problems essential knowledge about the basic mechanisms of the living body and the fundamental nature of health and disease; and,

WHEREAS, the enactment of S. 533 would give encouragement to those opposing vivi-section to seek further restriction and possibly complete prohibition against the utilization of living experimental animals in biomedical research; now therefore be it

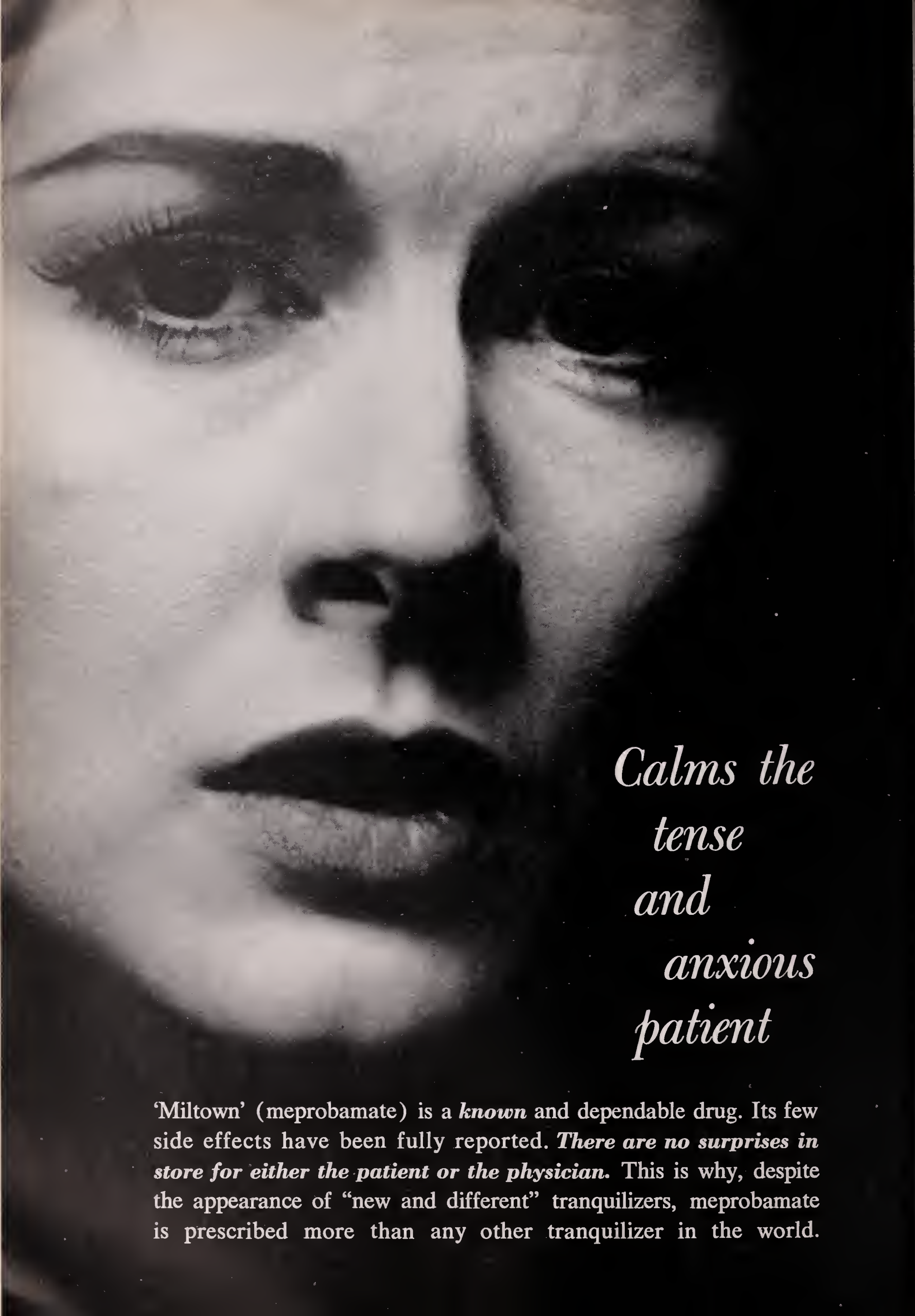
RESOLVED, that the Oregon State Medical Society does hereby express its opposition to the restrictive and arbitrary standards proposed in S. 533 relating to the care and utilization of laboratory animals; and, be it further

RESOLVED, that a copy of this resolution be sent to Senator Joseph Clark of Pennsylvania and Senator Maurine Neuberger of Oregon and the other members of the Congressional delegation, to the Secretary of the Department of Health Education and Welfare, to the National Society for Medical Research and to Dr. David W. E. Baird, Dean of the University of Oregon Medical School.

8. That a proposal that the Society's name be changed to Oregon Medical Association be referred to an appropriate committee.

9. That Resolution No. 7 adopted by the House of Delegates at its Midyear Meeting and directing that the Society give attention to the care of the chronically ill be referred to the Committee on the Quality of Patient Care (to be appointed) and the Committee on Prepaid Medicine.

continued on page 538



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10. That the Executive Committee continue to hold monthly meetings during the summer period and that meetings of the Board of Trustees be discontinued during the months of July, August and September except upon the call of the Executive Committee.

11. That Mr. Bissell, Associate Executive Secretary, be authorized to continue his affiliation with the Public Relations Roundtable of Portland and that the annual dues of $5 per year be paid from Society funds.

12. That the Executive Committee in considering the 1964 budget be directed to include the costs of membership in the Public Relations Society of America for Mr. Bissell including the $20 initiation fee and the annual dues of $60.

Upon motion duly made, seconded and carried, it was voted to amend the report of the Executive Committee to provide that the resolution commending the Oregon Farm Bureau Federation be appropriately revised and submitted to the House of Delegates of the American Medical Association at its 1963 Annual Meeting in Atlantic City.

Upon motion duly made, seconded and carried, it was voted that the recommendation proposing a change in the Sociey's official name be referred to the appropriate committee with special emphasis being given to the favorable action of the Board of Trustees.

Upon motion duly made, seconded and carried, it was voted that the recommendations of the Executive Committee of the Board of Trustees *as amended* be adopted.

Mrs. J. Cliffton Massar presented a report on the principal actions of the Woman's Auxiliary at the meeting of its Board of Directors on June 4th emphasizing the preparation being made by the Auxiliary to participate in "Operation Hometown." Mrs. Massar then introduced Mrs. Guy R. McCutcheon, President-Elect of the Woman's Auxiliary.

Mr. Peter Bergreen, Sophomore student at the University of Oregon Medical School and Vice-President of the Oregon Chapter of the Student American Medical Association, presented an excellent and comprehensive report of the Annual Meeting of the Student American Medical Association held in Chicago May 1-4, 1963. Mr. Bergreen reviewed the action of the House of Delegates of the Student American Medical Association relative to federal legislation and reported that for the second consecutive year a student from the University of Oregon Medical School had been elected National President. A Junior at the University of Oregon Medical School, Mr. Robert O. Voy, is the third President of the Student American Medical Association from the University of Oregon Medical School Chapter. Mr. Bergreen recalled that James A. Belt, now practicing in Anaheim, California, was President in 1956 and that Mr. Voy had been preceded in that office by James Brooks.

Mr. Voy was then introduced and received a standing reception. He requested authorization from the Board of Trustees to extend an invitation to visit Portland at the time of the 1963 AMA Clinical Session during his address to the House of Delegates of the American Medical Association at the Atlantic City meeting.

Upon motion duly made, seconded and carried, Mr. Voy was authorized to extend the invitation and an invitation was extended to him to sit with the Oregon delegation on the floor of the House of Delegates of the American Medical Association in Atlantic City.

Edward E. Rosenbaum, Chairman of the Committee on Aging, presented a comprehensive report of the 1963 "Little White House Conference on Aging," held in Washington, D.C. April 21-24 at the invitation of the President of the United States. Dr. Rosenbaum's report was supplied to the members of the Board in multilith form.

Clinton S. McGill, Chairman of the Committee on Public Policy presented an abbreviated report summarizing the major actions of the 1963 Oregon Legislature and explained that a complete report was not possible inasmuch as the Legislature had been adjourned only a few days.

Dr. Richard E. Markley, Chairman of Committee on Conservation of Vision, presented a report of that Committee which contained the following recommendations:

> 1. That a vision screening program for preschool children being developed by the Maternal and Child Health Section of the Oregon State Board of Health with the cooperation of the Committee on the Conservation of Vision and to be conducted through local health departments be approved.
>
> 2. That the glaucoma screening program for persons over sixty-five years of age especially those affiliated with "Golden Age" and similar clubs be approved provided they are conducted upon the invitation of a component society.

Upon motion duly made, seconded and carried, it was voted to lay on the table the recommendation for approval of the vision screening program for preschool children.

Upon motion duly made, seconded and carried it was voted to approve the glaucoma screening program for persons over sixty-five years of age.

Ernest T. Livingstone, Chairman of the Committee on Annual Session, submitted a report on the scientific program to be presented at the 1963 Annual Meeting being held in Portland, September 24-28 in conjunction with the Annual Meeting of the Oregon Academy of General Practice and the Thirty-

Seventh Sommer Memorial Lecture Series. The report also contained information regarding the status of the technical, scientific and physicians art exhibits and the arrangements for the meetings of the delegate bodies of the Academy and the Society, the Annual Banquet and Inaugural Ball and the Annual Golf Tournament.

Max H. Parrott, delegate to the American Medical Association and Chairman of the Committee on National Policy, reviewed some of the major issues to be considered by the House of Delegates of the American Medical Association at its 1963 Annual Meeting in Atlantic City and gave special emphasis to the Society's support of Raymond M. McKeown for re-election to the Board of Trustees of the American Medical Association and the promotion of Melvin W. Breese for election to the Association's Council on Medical Education and Hospitals.

Herman A. Dickel, Chairman of the Committee on Medical Education and alternate delegate to the American Medical Association, presented the following resolution recommended by the Committee:

WHEREAS, the Special Report of the Council on Medical Education and Hospitals and the Council on Medical Service of the American Medical Association relating to the "Compensation of Interns and Residents" submitted to the House of Delegates at its 1962 Clinical Session in Los Angeles appeared to place an inordinate responsibility for such compensation upon the attending physician; and,

WHEREAS, such responsibility might tend to discourage some hospital attending staffs from continuing to offer and participate in intern and residency training program; and,

WHEREAS, for this and other reasons action on the recommendations of the two Councils was deferred to the 1963 Annual Meeting of the American Medical Association House of Delegates; and,

WHEREAS, the two Councils are submitting a redraft of its Special Report at the 1963 Annual Meeting which recommends the establishment of a special fund of the professional staff for the support of intern and residency training programs, a principal not included in the original draft of the special report; and,

WHEREAS, the redrafted report of the two AMA Councils recommends that the sources and the amounts of compensation for interns and residents, as well as the apportionment of financial responsibility be determined locally by agreement between the hospital governing body and the attending staff; and,

WHEREAS, the Committee on Medical Education of the Oregon State Medical Society believes that the recommendations contained in the redrafted report of the two Councils sufficiently provides wide latitude for the development of local agreements and implementation and has found them acceptable to its members who are currently participating in intern and residency training programs in Oregon hospitals; now, therefore be it

RESOLVED, that the Board of Trustees of the Oregon State Medical Society endorse the recommendations contained in the redrafted special report of the Council on Medical Education and Hospitals and the Council on Medical Service of the American Medical Association being submitted to the AMA House of Delegates at its 1963 Annual Meeting in Atlantic City, and that the Society's Delegates to the American Medical Association be advised of this action.

Upon motion duly made, seconded and carried, it was voted to amend the last paragraph of the resolution so as to read as follows:

RESOLVED, that the Board of Trustees of the Oregon State Medical Society endorse the recommendations contained in the redrafed special report of the Council on Medical Education and Hospitals and the Council on Medical Service of the American Medical Association being submitted to the AMA House of Delegates at its 1963 Annual Meeting in Atlantic City, *except that the Society suggests that further consideration be given to the charging of fees for medical services of house officers and the utilization of such fees for compensation of house officers*, and that the Society's delegates to the American Medical Association be advised of this action.

Upon motion duly made, seconded and carried, it was voted that the resolution recommended by the Committee on Medical Education as amended be adopted.

Otto C. Page, General Chairman of the local Committee on Arrangements for the 1963 Clinical Session of the American Medical Association to be held in Portland, December 1-4, presented a report on the arrangements for the session including the nature of the scientific program. The report also contained the following recommendations:

1. That the Oregon State Medical Society agree to underwrite any deficit which might develop as a result of the entertainment activities being planned.
2. That the Society budget at least $500 for the use of the Woman's Auxiliary in maintaining woman's hospitality areas in both the Hilton Hotel and Memorial Coliseum.

Upon motion duly made, seconded and carried, it was voted that the Executive Committee of the Board of Trustees be authorized to expand Society funds in accordance with the recommendations of the Local Committee on Arrangements for the 1963 Clinical Session of the American Medical Association.

There being no further business the meeting was adjourned.

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WASHINGTON

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SECRETARY *Wilbur E. Watson, M.D., Seattle*
EXECUTIVE SECRETARY *Mr. R. W. Neill, Seattle*
annual meeting September 15 - 18, 1963, Seattle

WSMA Prepares for 74th Annual Meeting, September 15-18 Olympic Hotel, Seattle, Wash.

Scientific exhibits chosen

The author of the best scientific exhibit at this year's meeting will be presented the Aesculapius Award Certificate and a cash prize of $200. The award is sponsored by Mead Johnson. The WSMA Scientific Exhibit Committee is assigned the task of choosing the best of the following exhibits accepted for presentation: pathologic anatomy of the rheumatoid hand, D. Kay Clawson, M.D.; Arthritis and Rheumatism Foundation Rehabilitation Center, Robert Willkens, M.D., Bruce Zimmerman, M.D., John Decker, M.D., and Albert Cooper, M.D.; rate of spermatogenesis in man—determined by incorporating tritiated thymidine in testes, Carl Heller, M.D., Ph.D., Donald J. Moore, A.B., Yves Clermond, Ph.D., Lorna J. Matson, A.B.; radioisotopes in clinical diagnosis, Gordon D. LaZerte, M.D.; lymphography, W. J. Mikkelsen, M.D.; adoption information exhibit, Robert F. L. Polley, M.D., Donald Lewis, M.D., and Walter Keifer, M.D.; treatment of iliofemoral thrombophlebitis by thrombectomy, Alfred Sheridan, M.D., Lester Sauvage, M.D., Donald Burke, M.D., and Stephan Wood, M.D.; treatment of reflux esophagitis and haital hernia, D. H. Dillard, M.D., Howard N. Anderson, M.D., and Eugene A. Hessel, M.D.; disability evaluation of facial injuries: a new simplified method, Gilbert G. Eade, M.D. and Matthew A. Pilling, M.D.; impedance plethysmography for office diagnosis of peripheral vascular disease, K. W. Edmark, M.D., George I. Thomas, M.D., and Thomas W. Jones, M.D.; air resources management, Robert L. Stockman, M.D. and Peter W. Hildebrandt, M.D.; the diffuse obstructive pulmonary syndrome, C. J. Martin, M.D.; the use of grafts in the cardiovascular system, Lester Sauvage, M.D., S. J. Wood, M.D., A. H. Bill, Jr., M.D., K. E. Berger, M.D., S. Robel and R. Viggers; hybaroxic radiation therapy in cancer management, Orliss Wildermuth, M.D.; proprioceptive neuromuscular facilitation exercise technique, Albert L. Cooper, M.D., Eva LeBlanc, and Eli Skaugvoid; applications of arterial catheterization in the general practice of radiology, Owen Martin, M.D.

Dr. Annis keynote speaker

Edward R. Annis, Miami, President of the American Medical Association and nationally recognized spokesman for the medical profession, will deliver an address at the Sunday evening, September 15, WSMA Convention Family Banquet.

Election into one of medicine's most select groups will also be held Sunday evening when the new members of the "Fifty-Year Club" are presented their pins of membership. Physicians who have practiced medicine fifty years or more are eligible.

Appointments at U of W

The University of Washington Board of Regents has recently announced the appointment of Ralph J. P. Wedgwood as chairman of the Department of Pediatrics at the University of Washington School of Medicine and William O. Robertson as medical director of University Hospital, assistant dean of the School of Medicine and associate professor of pediatrics.

Dr. Robertson was assistant dean at Ohio State University College of Medicine before the appointment, Dr. Wedgwood came to Washington last year as associate professor of pediatrics from Western Reserve University, where he had taught since 1953.

Dr. Wedgwood succeeds Robert A. Aldrich who is on leave as director of the newly-created National Institute of Child Health and Human Development. Dr. Robertson succeeds John R. Hogness who will become full-time associate dean of the School of Medicine.

Madigan award

Henry N. Harkins, professor of surgery at the University of Washington School of Medicine was awarded the Certificate of Appreciation for Patriotic Service of the Army. The honor was given him for his contributions as senior surgery consultant to the hospital's Medical Care Program.

Bulletin From Dr. Jess W. Read, Chairman Washington State Medical Disciplinary Board

Narcotic Addicts

In recent months, The Washington State Medical Disciplinary Board has been greatly concerned about the volume of narcotic and other dangerous drugs obtained by addicts on prescriptions from physicians.

Under state law, Chapter 18.72 of the Revised Code of Washington, the Board is charged with the duty to investigate complaints of "unprofessional conduct" made againt persons licensed to practice medicine and surgery in Washington. The statutory definition of "unprofessional conduct" includes the use or prescription of narcotic or dangerous drugs for other than a therapeutic purpose. In the Board's opinion, "therapeutic purposes" does not include supplying addicts with narcotics or "dangerous drugs."

It should be noted that where the Board finds merit to a complaint, a hearing is held. If the licensee is found guilty of "unprofessional conduct," the Board is empowered to reprimand the licensee or suspend or revoke his license.

Information received from local, state and federal law enforcement officials, including the State Pharmacy Board and the Federal Narcotics Bureau, has revealed that there is a serious problem in certain areas of the state. The Board has been, and intends to continue, investigating the problem and taking appropriate action.

The Board wishes to forewarn physicians that current sources of supply are being closed and that addicts will be looking for new sources. Those who have not been bothered in the past will be approached. In addition, physicians must exercise greater control over supplies and lock their bags in the car trunk; for, the addicts will continue to search out and steal the physician's bag and supplies. Incidentally, physicians should recall that narcotic thefts must be reported to the federal bureau.

Our investigation reveals that the addict will travel many miles seeking prescriptions. He calls on several physicians during the same period and sells his surplus. He passes the word and other addicts literally descend on physicians who have acceded to the addict's request.

Perhaps the best tip-off of an addict is his attempt to suggest or "prescribe" a drug, or his complaint of some chronic internal condition. The physician must always be on guard with any new patient and our investigation indicates tha he should also be alert even after having seen the patient a few times. For the addict will readily lie or steal in order to obtain narcotics or some dangerous drug substitutes, so as to satisfy his craving.

From the Board's investigation, it appears that addicts tend to seek out the elderly or newly established physicians.

Two actions by the physicians will correct the problem. If the physician investigates the condition supposedly causing pain or makes a hospital referral, the addict will almost always leave the clinic or refuse hospitalization. If the physician offers to check with the local law enforcement agencies or the narcotics bureau, the addict is certain to run, and is almost never belligerent or threatening.

The assistance of every physician is needed in controlling illegal narcotic and dangerous drug traffic.

CONSTITUTIONAL AMENDMENT

PROPOSED AMENDMENT TO ARTICLE IV, SECTION 3 (b) OF THE CONSTITUTION OF THE WASHINGTON STATE MEDICAL ASSOCIATION

ARTICLE IV—COMPONENT SOCIETIES

Section 3. Issuance of Charters.

(b) After the issuance of the charters provided for immediately above, the Board of Trustees, with the approval of the House of Delegates, may charter as a component society a medical society representative of the medical profession of a county as circumstances may dictate or as seems desirable. No charter shall be issued with respect to a county in which a component society previously chartered has territorial jurisdiction ((except)); **provided, however, the Board of Trustees may create a state-wide component society on an interim basis only to implement the merger of the Washington State Osteopathic Association into the Washington State Medical Association; provided, futher,** that whenever an increase in membership warrants, an additional component county society may be chartered within the previous territorial jurisdiction of an existing

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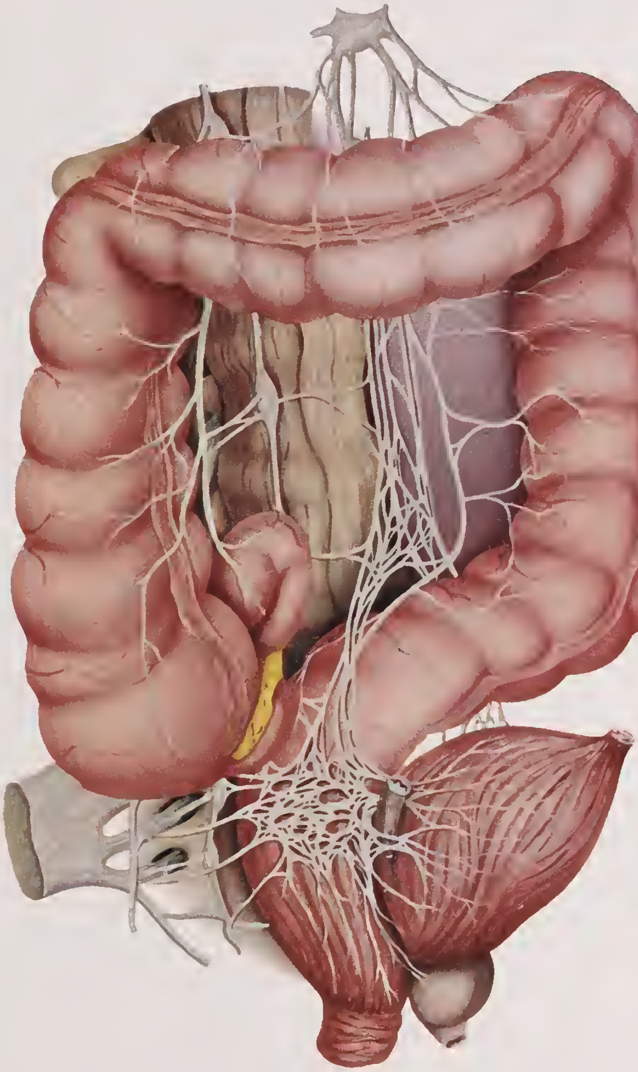

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continued from page 542

component society composed of two or more counties.

V. W. Spickard, M.D., Chairman, Committee on Revision of Constitution and By-Laws

This amendment will be submitted for final acceptance by the House of Delegates at the WSMA meeting, September 15-18. (See page 77, January, 1963 issue.)

OBITUARIES

DR. JAY DURAND, *former Seattle pediatrician and chief of pediatric services at Children's Orthopedic Hospital, died March 21 in Victoria, B.C. He lived there following his retirement in 1954, after 40 years of practice in Seattle. Dr. Durand established the first hospital-pediatric service in the city at the old Queen Anne Hill Orthopedic Hospital. He was an organizer and past president of both the American Academy of Pediatrics and the Northwest Pediatric Society and was chairman of children's diseases section of the American Medical Association. He was granted his degree by the University of Minnesota Medical School in 1905, he was 85.*

DR. JOSEPH PRESLEY CALDWELL *died May 5 in Cheney. He was 63. Born in Pittsburgh, he moved to Cheney 30 years ago. He was granted his degree by Northwestern University Medical School in Chicago in 1934. He was a member of the American Academy of General Practice.*

DR. JAMES G. CUNNINGHAM, *a native of Bellingham and resident of Seattle for the past 30 years, died May 14, at 47. A graduate of St. Louis University School of Medicine in 1950, he was licensed in 1952. Dr. Cunningham practiced in Seattle.*

DR. RODERICK JANSON, *of Seattle, died April 17, from an injury sustained in a traffic accident on January 29. He was 65. He was granted his degree by the University of Minnesota Medical School in 1925, was licensed in 1927. Dr. Janson had practiced in Seattle since 1927. He was staff physician for Group Health Hospital. Dr. Janson was a World War I veteran.*

DR. PHILIP L. NEWMYER, *of Olympia, died April 11 of coronary artery occlusion. Dr. Newmeyer, born in Nebraska in 1887, had practiced in Oregon and California, before his retirement 12 years ago. He graduated from Williamette University Medical Department in 1913.*

DR. ERWARD A. MARSHALL, *86, died April 14, of myocardial failure, in Ocean Park. He received his degree from Universcity of Oregon Medical School in 1902. A native of Hamilton, Ontario, he practiced in Portland before his retirement 30 years ago.*

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SECRETARY	*A. Curtis Jones, M.D., Boise*
EXECUTIVE SECRETARY	*Mr. A. L. Bird, Boise*

annual meeting June 26-29, 1963, Sun Valley

Committee on medical education

A 65-member statewide committee on medical education has been appointed by Governor Robert E. Smylie and held its first meeting in Boise on Monday, June 17, in the Legislative Chambers of the Statehouse.

The purpose of the committee is to assist in a study to determine the needs and resources for medical education in Idaho and the possibility of the establishment of a Regional Medical School by the states of Idaho, Montana, Nevada and Wyoming.

James M. Faulkner, former Dean of Boston University Medical School, is directing the study and activities of the Idaho Committee and comparable committees in the three other states.

Physicians appointed to the committee include: Manley B. Shaw, A. Curtis Jones, Robert S. McKean, Alfred M. Popma, all of Boise; Donald K. Worden, Lewiston; E. V. Simison, Pocatello, E. R. W. Fox, Coeur d'Alene. Executive Secretary Bird was appointed also.

Idaho Heart Association

Ben E. Katz, Twin Falls, is the new President of the Idaho Heart Association. He succeeds William D. Forney of Boise.

Other physician officers elected at the organization's annual meeting held in Boise in May include A. Lloyd Barrott, St. Anthony, President-Elect; Lynn H. Anderson, Pocatello, Vice-President; Burton R. Stein, Lewiston; C. C. Johnson, Boise; Lester C. Crismon, Lewiston, Roy O. Shaub, Twin Falls; Robert E. Hay, Nampa, and B. I. Copple, Boise, members of the Board of Directors.

State Board of Medicine section

The regular meeting of the State Board of Medicine was held in Boise, July 8, 9, 10 for the purpose of conducting business and granting licenses. Members of the Board are S. M. Poindexter, Boise, Chairman; W. Wray Wilson, Coeur d'Alene, John E. Comstock, Pocatello, Charles E. Kerrick, Caldwell, James S. Newton, Lewiston, and Charles A. Terhune, Burley.

No Temporary Licenses were granted in May.

Symposium on human physical endeavor

A symposium on human physical endeavor, sponsored by the Physical Education Department of the College of Idaho was held on campus in Caldwell, June 10-14. The series included lectures, discussions and demonstrations covering recent advances in sports medicine, anatomy, physiology, nutrition and neurology.

OBITUARY

DR. EDGAR L. WHITE, *80, died in Lewistown, May 20. Born at St. Louis, Missouri, April 21, 1883, he obtained his medical degree from Rush Medical College, Chicago, in 1909, and interned at St. Luke's Hospital, Spokane, Washington. He established his practice in Lewiston in 1910.*

Dr. White constructed the 32-bed hospital there in 1916 at a cost of $19,900.00 and it continued operation until 1946, when it closed because of nurse shortage. He also operated a training school for nurses from 1917 to 1930.

Dr. White served in the Army Medical Corps in World War I and was active in the American Legion. At the time of his death he was Dean of the Past Potentates of Calam Temple of the Shrine. He had served as Potentate in 1919. He was a member of the Masonic Lodge, the Knights of Pythias and the Lewiston Elks Lodge.

In June of 1959, Dr. White recalled that in fifty years of practice in Lewiston he had delivered 3,000 babies, three of whom became physicians: Joseph E. Baldeck, James H. Bauman and Oliver M. Mackey, Jr., all of Lewiston.

An avid trapshooter, Dr. White served six terms as President of the Lewiston Gun Club. He was a member and past-president of the Hi-Yu Indian and Pacific Indian Trapshooters, an organization with headquarters in Harrison, B.C. For many years, he had served as physician on the Lewiston Roundup Board of Directors and was an honorary director at the time of his death.

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House of Delegates at Atlantic City

Meeting of the AMA House of Delegates at Atlantic City last month was characterized by thoughtful handling of a considerable volume of business. As much as any such session, it might be called efficient although the word hardly applies to any meeting during which more than two hundred delegate days are wasted.

With a few important exceptions, transactions of the first day of any meeting of the House could be condensed into brief announcements about published material, a message or two of significance, and a start on the real work of the session. At least a half day could be saved. Elimination of a number of non-essentials plus a bylaw amendment permitting election of officers before the final day of the session would have saved the delegates an entire day at Atlantic City. Since there are 226 seats in the House, the saving would have been more than two hundred delegate days, not even considering the time of alternate delegates, many of whom attend the meetings. In view of progress in conduct of the meetings in recent years, it would appear that this saving in time might be attainable without much difficulty.

Northwest winners

Election to important office was won by three representatives of the Northwest. Raymond M. McKeown's many contributions to AMA were recognized by a heretofore infrequent third election to the Board of Trustees. His election was by acclamation and was followed by enthusiastic applause. He was first elected to a one year term at New York in 1957. The following year, at San Francisco, he was re-elected, this time for five years. Due to changes in constitution and bylaws, the term initiated by the Atlantic City meeting this year will be for three years. Trustees formerly held office for a term of five years and were limited to two terms. With adoption of amendments at Atlantic City on the third day of the meeting, the present plan is for terms of three years but a trustee may serve three terms. The Board now consists of 15 men - twelve elected delegates, the President, President-Elect and immediate Past-President. The Speaker, Vice-Speaker and Vice-President attend but do not vote.

Melvin W. Breese, of Portland, President of the Oregon State Medical Society won a surprising election to the Council on Medical Education and Hospitals. Surprise was due to the fact that he was relatively unknown to the delegates who commonly give preference to those with previous experience in the House. Dr. Breese was nominated by the Board of Trustees because of his qualifications and many strong recommendations. A number of candidates had been considered.

Considerably less surprising was the election of Jess Read, of Tacoma, to the Council on Medical Service. He is well known and highly respected in the House, not only for his competent AMA committee work but also for his background in affairs of the Washington State Medical Association and the Washington State Medical Disciplinary Board. He is currently chairman of the latter.

officers

Neither was there surprise when Norman Welch, who has been a very popular Speaker, won an uncontested advance to become President-Elect. Milford Rouse of Texas, replaces him as Speaker and W. C. Bornemeier, of Chicago is the new Vice-Speaker. Donovan Ward, of Dubuque, Iowa is Vice-President.

Percy Hopkins, of Illinois was re-elected to the Board of Trustees. New members of the Board are Dwight Wilbur of California, R. C. Long of Kentucky, Les Bibler of Indianapolis and L. O. Simonstad of Wisconsin, all well known in the House.

research institute sponsored

In his report to the House on affairs of the American Medical Association Education and Research Foundation, Dr. McKeown announced establishment of a research institute. It is to be known as the Institute for Biomedical Research and will be devoted to fundamental research rather than to clinical investigation. The plan is built around the idea of a group, or groups, of talented workers who will be completely free to follow their own interests into the field of life processes. It is expected that the main emphasis will be on intracellular structure and physiology. It is anticipated that actual operation will begin early in 1965.

commission on pharmacy and medicine

Study of interprofessional relationships will be undertaken by a new Commission on Pharmacy and Medicine, established by the Board of Trustees in cooperation with the National Association of Retail Druggists and the American Pharmaceutical Association. Each organization will have four representatives. The action of the Board of Trustees in establishing the commission was approved by the House.

trade commission ruling

During its studies of problems of ophthalmology, the Commission to Coordinate the Relationships of

Medicine with Allied Professions and Services was made aware of a new ruling by the Federal Trade Commission affecting physicians. The ruling would make a physician a member of an industry, and subject to FTC control, when he sells a product of the industry. This is interpreted, by the FTC, to mean that prescribing of an industry product by a physician in the practice of his profession is to be subjected to certain restrictions. The House directed the Board of Trustees to investigate this ruling and take any necessary steps for clarification. This directive was based on the portion of the Commission's report realing with court decisions on professional practice. They would appear to make the FTC ruling untenable.

mental health

The House was given opposing points of view, on construction and early operation of mental health facilities, by two councils. The Council on Mental Health urged that the AMA support federal financing of construction and early operation of such facilities. The Council on Legislative Activities urged opposition to any federal support other than in construction. The reference committee brought in a report disapproving the viewpoint of the Mental

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Health Council and raising some questions about agreement with what has been called the bricks and mortar approach in federal financing. The reference committee recommended that the bricks and mortar policy of AMA be reviewed by the Board of Trustees and that a report be made to the House at the next session. An amendment was offered which would have put AMA in support of federal funds for staffing mental health facilities but it was soundly defeated.

Two resolutions from Massachusetts were adopted after the above action was taken. Both supported the principal of physician care of the mentally ill and one opposed efforts of federal and state agencies to engage in activities restricting availability and benefits of private care.

pension plan

The Board of Trustees announced that a pension plan had been developed for AMA members who wish to take advantage of one of the provisions of Public Law 87-792. This was approved by the House. It is a group plan, having the following advantages as reported by the Board: ease of participation from the standpoint of the individual physician; low cost for administration and servicing; increased opportunity for sound investment of retirement dollars; and facilitation of required reports to the U. S. Treasury.

Under the plan developed by the Board, the cumulative contributions of each participant will be individually identified, pooled for investment purposes, and, together with a pro-rata share of earnings, returned to the participant upon his retirement.

tobacco and health

Big guns of the American Cancer Society were trained on the Reference Committee on Public Health and Occupational Health. Appeals to the AMA to condemn cigarette smoking were articulate, impassioned, and insistent. A long list of organizations supporting the Cancer Society's campaign was presented but this drew from Gerald Dorman of New York, a member of the Board of Trustees, the gentle reminder that the AMA need not take action merely because others had done so. In spite of the pressure, the reference committee came out with a statement that there were many toxic substances deleterious to health and that considerable research was necessary to determine the effects of many toxins, including tobacco. It was stated that the AMA has a duty to point out effects on the young of the use of toxic materials, including tobacco, and that these facts should be disseminated, particularly in our schools. In a supplementary report, the Board of Trustees had recommended that an AMA statement on tobacco be deferred until more information had been accumulated. This position was taken by the House.

This brief report has touched on only a few of the actions of the House of Delegates at Atlantic City. There were many others. More than seventy resolutions were introduced, there were two dozen supplementary reports from the Board of Trustees and the House reviewed a number of special committee reports. This prodigious volume of work was considered by ten reference committees (two had no referrals) and voted on by the 226 member House. AMA publications will carry important communications on the meeting. All of these should be given careful consideration as they reveal the activities and directions of AMA, not always understood or appreciated by members.

A file of all of the resolutions and official reports is available in the editorial office of this journal. Limited numbers of duplicator copies can be provided. Write, *Editor, Northwest Medicine, 500 Wall Street, Seattle 1, Washington.*

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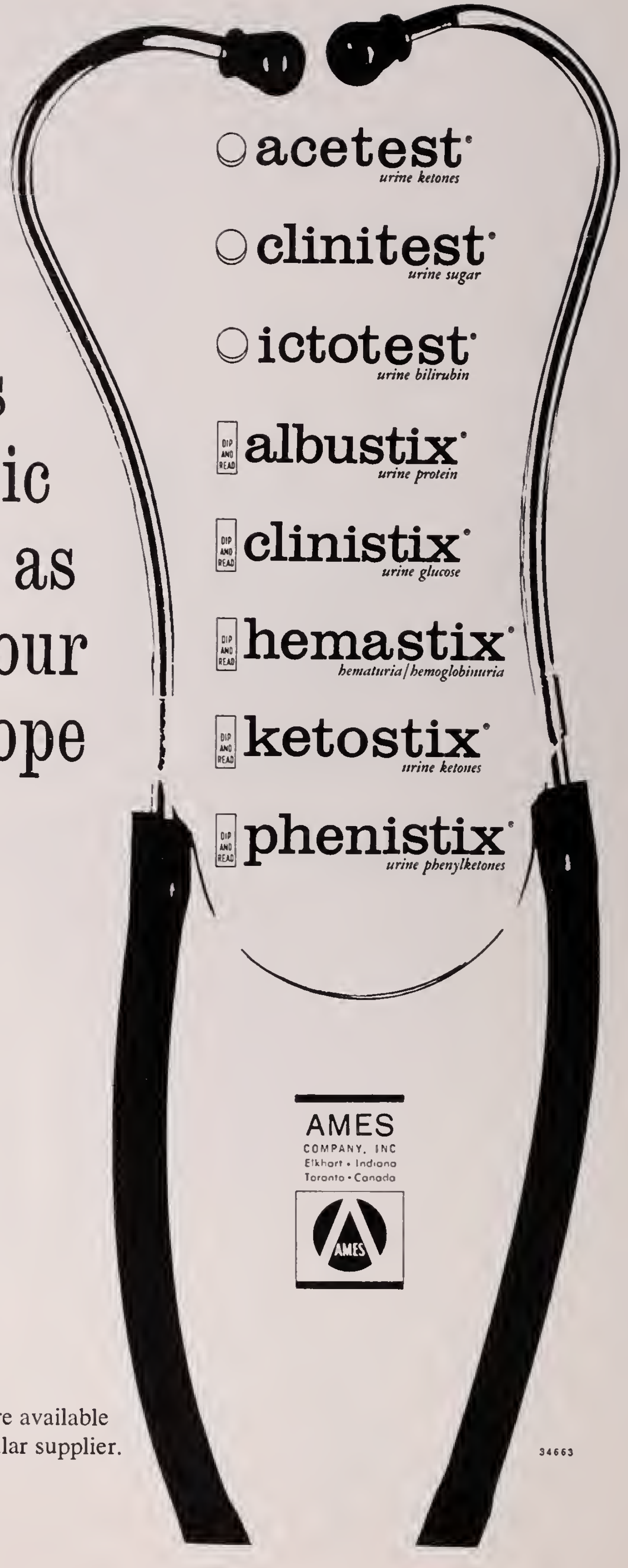

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*Stetson, J.B., and Jessup, G.V.S.: Anesth. & Analg. 41:203, 1962.

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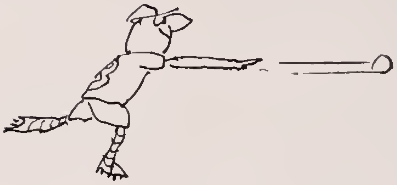

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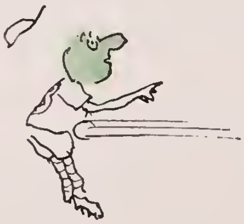

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*Scal, J. C.: Eye Ear Nose & Throat Month. **38**:738 (Sept.) 1959.

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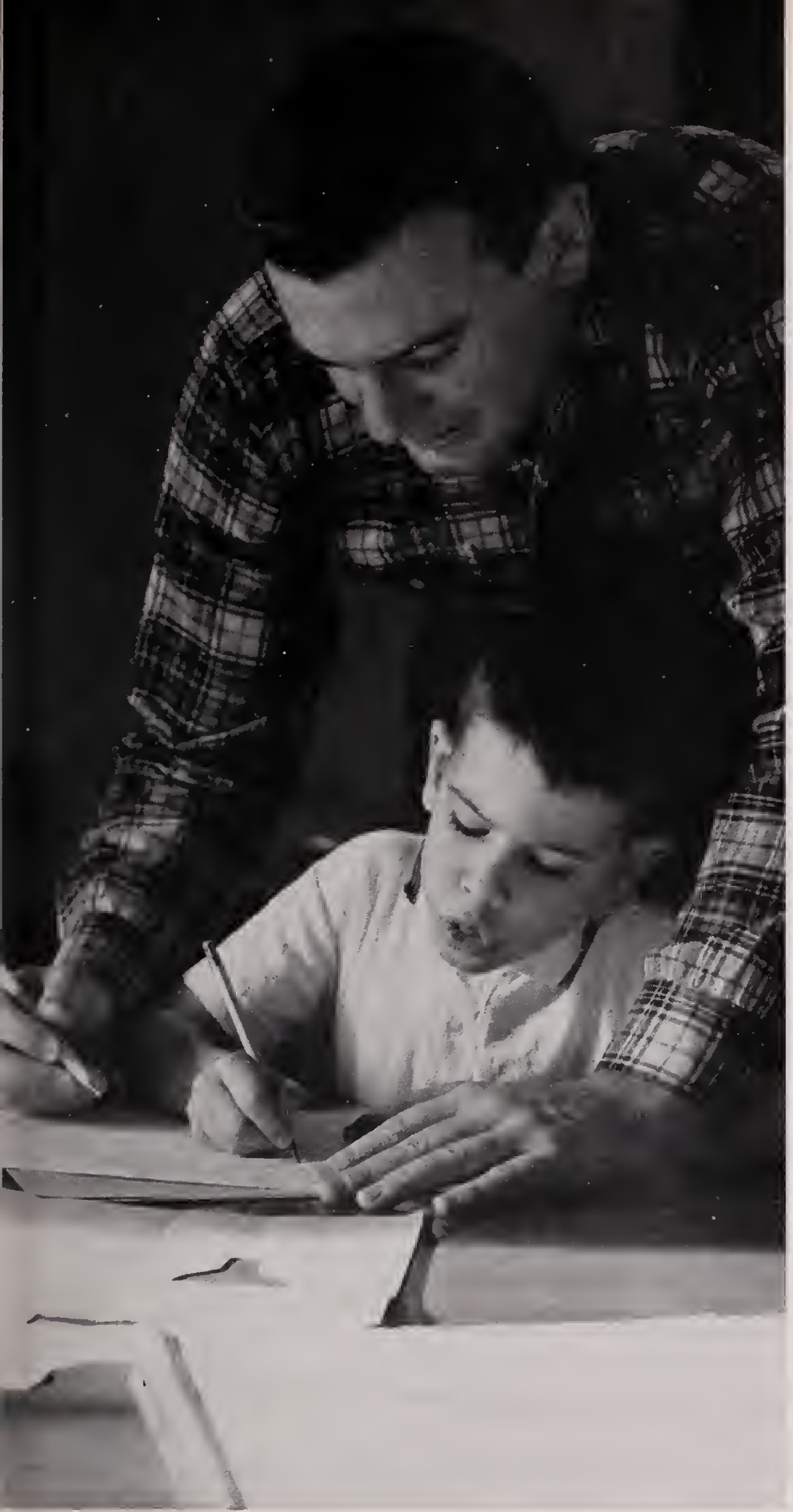

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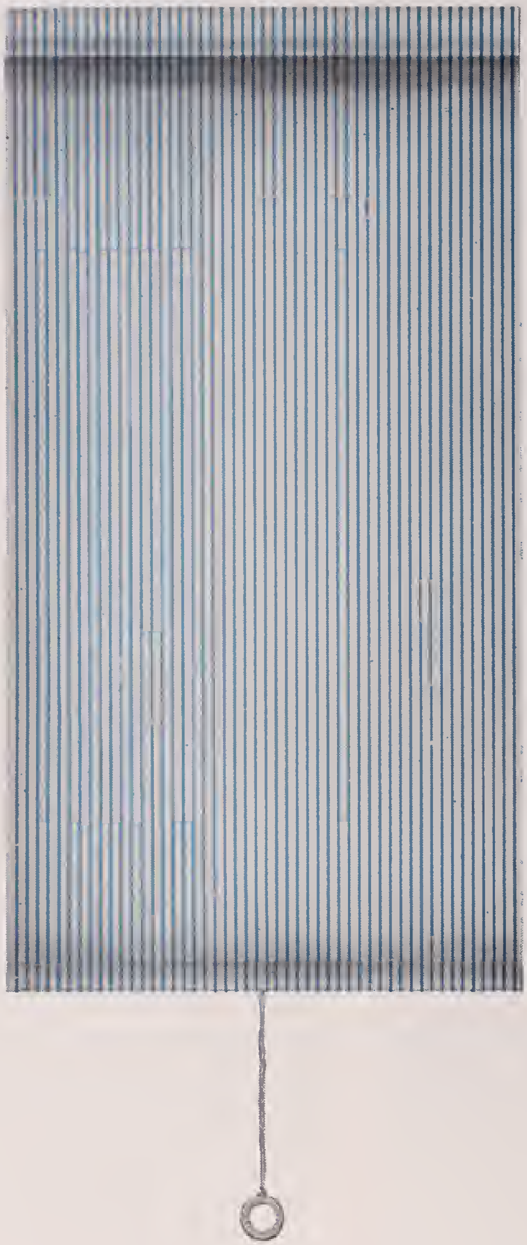

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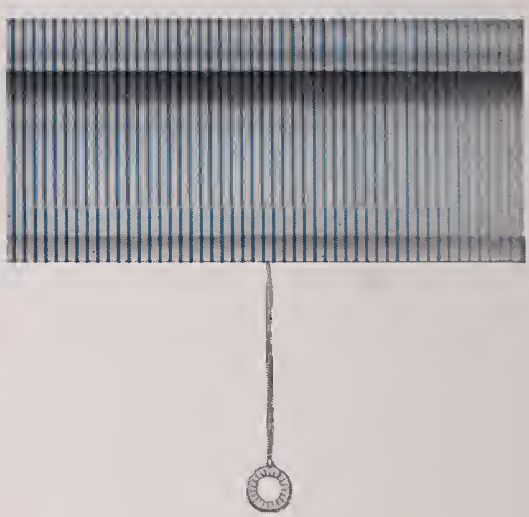

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BOOKS

RECEIVED: The following books have been received. Publication of this acknowledgement is to be considered adequate return to the sender. Selected titles will be reviewed as space permits.

The practice of country radiology. By Donald de Forest Bauer, M.D., C.M., M.Sc., Associate Consulting Radiologist at Klamath Valley Hospital and Hillside Hospital, Klamath Falls, Oregon. 260 pp. Illustrated. Price $11.75. Charles C Thomas, Springfield. 1963.

The lower esophageal vestibular complex. By Constantion Zaino, M.D., F.A.C.R., Maxwell H. Poppel, M.D., F.A.C.R., Harold G. Jacobson, M.D., F.A.C.R., and Harold Lepow, M.D., F.C.A.P. 272 pp. Illustrated. Price $12.75. Charles C Thomas, Springfield. 1963.

Multi-compartment analysis of tracer experiments. Consulting Editor, Hiram E. Hart, Editor, Harold E. Whipple, Managing Editor, Stanley Silverzweig. 338 pp. Graphs. Price $6.00. New York Academy of Sciences, New York. 1963.

Margin of safety. By John Rowan Wilson. 258 pp. Illustrations. Price $4.95. Doubleday & Company, Inc., New York. 1963.

Nursing care of the long-term patient. By Jeanne E. Blumberg, R.N., P.H.N., M.S., and Eleanor E. Drummond, R.N., P.H.N., Ed.D. 134 pp. Price $2.75. Springer Publishing Company, Inc., New York. 1963.

Management of anxiety for the general practitioner. By Nathan K. Rickles, M.D., F.A.P.A. 108 pp. Price $5.00. Charles C Thomas, Springfield. 1963

A manual of diabetes for the house officer. By William T. Nunes, Major, MC. 108 pp. Illustrated. Price $5.00. Charles C Thomas, Springfield. 1963.

The specificity of serological reactions. By Karl Landsteiner, M.D. 330 pp. Price $2.00. Dover Publications, Inc., New York. 1963.

Indications for open-heart surgery. By Dryden P. Morse, M.D., Senior Attending Surgeon in Thoracic Surgery, Albert Einstein Medical Center. 213 pp. Illustrated. Price $8.75. Charles C Thomas, Springfield. 1963.

Reasearch methodology and potention in community health and preventive medicine. Consulting Editor Leonard M. Schuman, Editor Harold E. Whipple, Managing Editor Stanley Silverzweig. pp. 471-808. Price $5.00. New York Academy of Sciences, New York. 1963.

Electron microscopy of skin and mucous membrane. Edited by Arthur C. Curtis, M.D., Chairman, Department of Dermatology and Syphilology, University of Michigan, Ann Arbor. 173 pp. Illustrated. Price $8.50. Charles C Thomas, Springfield. 1963.

Clinical principles and drugs in the aging. By Joseph T. Freeman, M.D., F.A.C.P., with 26 contributors. 485 pp. Graphs. Price $16.00. Charles C Thomas, Springfield. 1963.

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AMA Annual—San Francisco, June 21-25, 1964, New York, June 20-24, 1965.

AMA Clinical—Portland, Dec. 1-4, 1963; Miami Beach, Nov. 29-Dec. 2, 1964.

Idaho State Medical Association—June 17-20, 1964, Sun Valley.

Northwest Soc. for Clin. Research—Jan. 10-11, 1964, Vancouver, B. C.
Pres., Denys K. Ford, Vancouver
Sec., R. E. Beck, Vancouver

Oregon State Medical Society—Sept. 25-28, 1963, Portland.

Washington State Medical Association—Sept. 15-18, 1963, Seattle.

West Coast Allergy Society, Dec. 5-7, 1963, Las Vegas, Nevada
Pres., M. Coleman Harris, San Francisco
Sec., James E. Stroh, Seattle

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Ore. Acad. Ophth. & Otolar.—Portland Aero Club, 4th Tue., Sept.-May.
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Oregon Dermatologic Society—Portland 2nd Wednesday (Nov., Jan.-Apr.)
Pres., Sheldon Walker, Portland
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Oregon Radiological Society—University Club, Portland, 2nd Wednesday through school year
Pres., L A. Gay, The Dalles
Sec., G. R. Satterwhite, Portland

Ore. Soc. Obst. & Gynec.—Portland, Park Heathman, 3rd Fri. (Oct., Nov., Jan., May)
Pres., W. L. Hartmann, Portland
Sec., T. A. Treanor, Portland

Oregon State Society of Anesthesiologists—Portland, 3rd Friday (except June, July, Aug.)
Pres., J. A. Siebs, Eugene
Sec., P. E. Schaff, Portland

Oregon Urological Society—Quarterly Meetings, University Club, Portland
Pres., T. A. Davis, Portland
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Portland Academy of Hypnosis — 3rd Monday (Sept.-May) Congress Hotel
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Sec., D. F. Milam, Jr., Bellevue

Seattle Academy of Surgery—3rd Wed. bi-monthly; Seattle Yacht Club.
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Seattle Gyn. Soc.—3rd Wed. exc. June, Aug., Dec., Feb.
Pres., D. M. McIntyre, Seattle
Sect., E. T. MacCamy, Seattle

Seattle Pediatric Society—3rd Friday (Sept.-May), College Club
E. J. Wollenweber, Seattle
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Seattle Surg. So.—4th Mon. (Sep.-June) Annual—Seattle, Jan. 24-25, 1964.
Pres., Eric Sanderson, Seattle
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Spokane Society of Internal Medicine—Quarterly, Rockwood Clinic
Pres., Robert Berghan
Sec., Richard E. Steury

Tacoma Academy of Internal Medicine—4th Tuesday (Sept.-May)
Pres., R. A. Kallsen
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Tacoma Surgical Club—May 2, 1964, 3rd Tuesday (Sept.-May)
Pres., Dumont Staatz
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Washington Academy of Clinical Hypnosis—3rd Friday (Sept.-June)
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Washington State Obstetrical Associa-October 12, 1963, Yakima.
Pres., R. K. Plant, Seattle
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Washington State Radiological Society—Seattle, 4th Mon., (Sept.-Apr.) Business Session, Meany Hotel, Scientific Sn. UWSM X-ray Dept.
Pres., W. A. Chesledon, Seattle
Sec., R. H. Rosenberg, Seattle

Wash. St. Soc. of Anesthesiologists
Pres., M. W. Bulmer, Wenatchee
Sec., Robt. M. Kintner, Wenatchee

Washington State Society of Internal Medicine—Sept. 18, 1963
Pres., D. M. Ulrich, Seattle
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Yakima Obstetrical and Gynecological Society—Last Monday (except July, Aug., Dec.)
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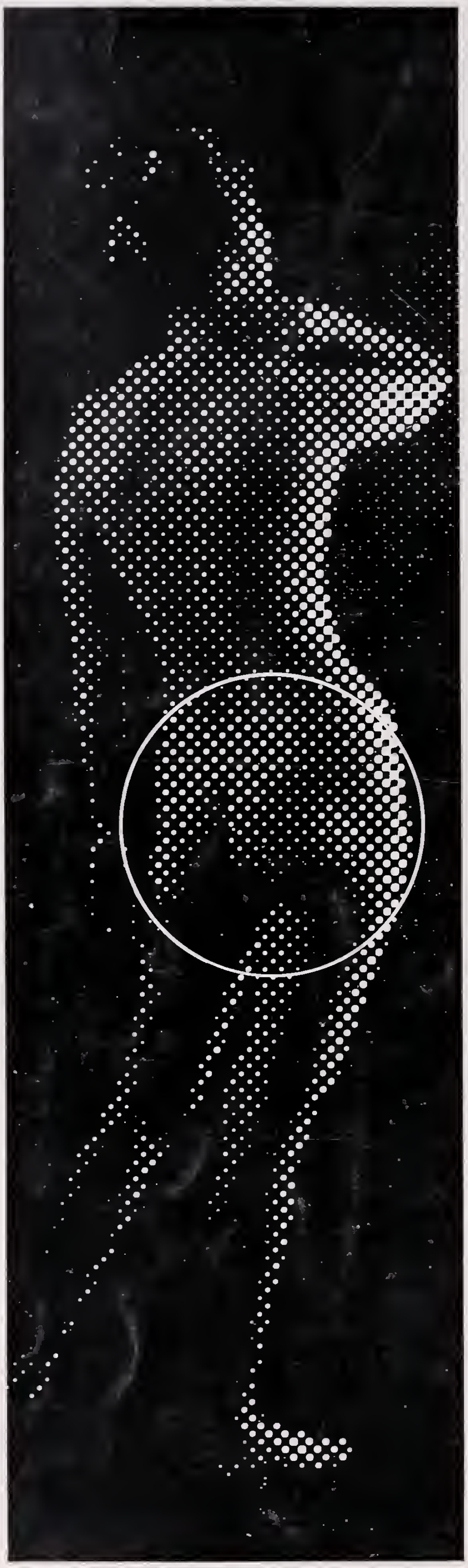

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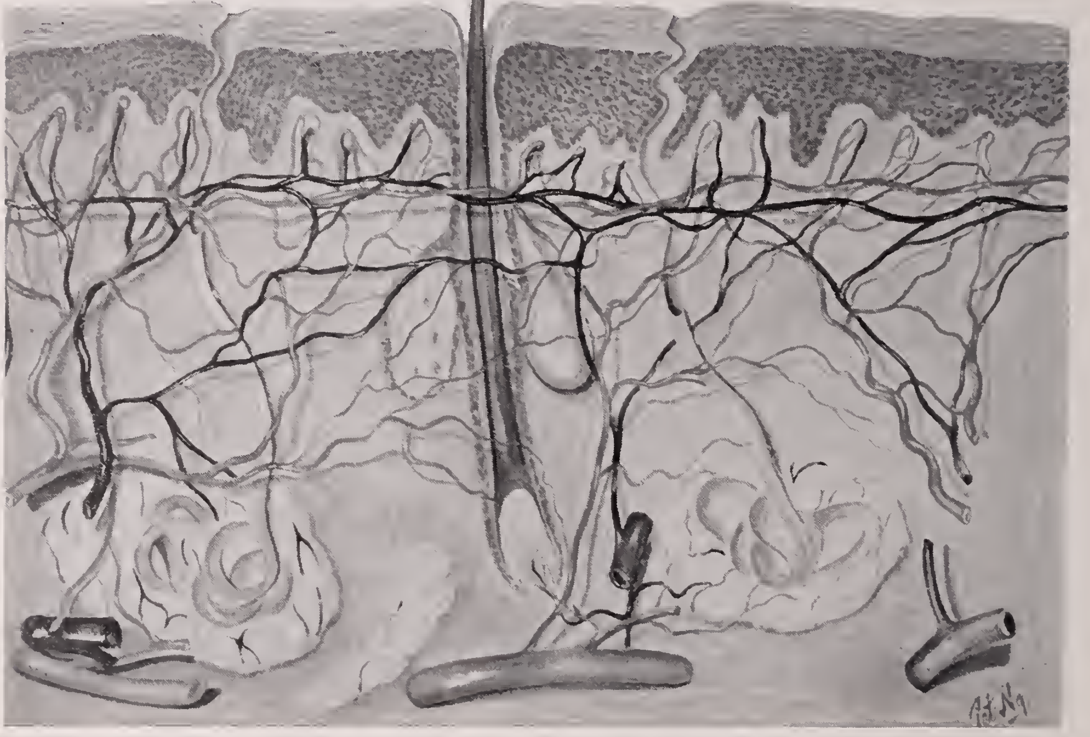

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Dosage and administration: Oral—10 to 20 mg. (1 to 2 tablets) t.i.d. or q.i.d.; I.M.—5 to 10 mg. b.i.d. or t.i.d. *Contraindications:* There are no known contraindications to oral administration of VASODĪLAN (Isoxsuprine HCl) in recommended doses. *Cautions:* Do not give immediately postpartum or in the presence of arterial bleeding. Parenteral administration not recommended in the presence of hypotension or tachycardia. Avoid intramuscular doses above 10 mg. *Side effects:* Occasional palpitation and dizziness usually controllable by dosage reduction. Brief hypotension or tachycardia may occur with intramuscular doses of 10 mg. or more.

For complete details on indications, dosage, administration, and clinical background, see the brochure of this product available on request from Mead Johnson Laboratories, Evansville 21, Indiana.

References: (1) Clarkson, I. S., and Le Pere, D. M.: Angiology *11*:190-192 (June) 1960. (2) Kaindl, F.; Samuels, S. S.; Selman, D., and Shaftel, H.: Angiology *10*:185-192 (Aug.) 1959. (3) Kaindl, F.; Pärtan, J., and Polsterer, P.: Wien. klin. Wchnschr. *68*:186-191 (March 16) 1956. (4) Samuels, S. S., and Shaftel, H. E.: J.A.M.A. *171*:142-145 (Sept. 12) 1959. (5) Billiottet, J., and Ferrand, J.: Semaine méd. *34*:635-637 (May 20) 1958.

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Dosage: 2 tablets every 2 to 4 hours. Tablets to be chewed and swallowed with minimum amount of fluids. 1 tablespoonful of liquid neosorb equivalent to 2 neosorb tablets. Supplied in sizes 100, 500 and 1,000 tablets. Liquid in quarts and pints.

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Librium (chlordiazepoxide HCl) has a w
range of usefulness. Its spectrum of acti
envelops and extends well beyond that
meprobamate and into certain indicati
for which phenothiazines are prescrib
This agent generally does not dull men
clarity or induce drowsiness. Its effect
prompt and decisive, even in patients
whom tranquilizer therapy has failed. Ov
all, it offers you an unusually safe compou
which is virtually free from extrapyrami
or autonomic side effects, and which
not bring about or deepen depression. It
available in capsules of 5 mg, 10 mg a
25 mg—a range of oral dosage streng
which enables you to treat all degrees
anxiety and tension in most patients.

Dosage: Oral—Usual adult dose in mild to moder
anxiety and tension is 5 or 10 mg, 3 or 4 times da
in severe anxiety and tension, 20 or 25 mg, 3 or 4 tir
daily. *Side effects:* Oral—Drowsiness and ataxia, u
ally dose-related, have been reported in some patie
—particularly the elderly and debilitated. Paradox
reactions, *i.e.*, excitement, stimulation, elevation of
fect and acute rage, have been reported in psychia
patients; these reactions may be secondary to relie
anxiety and should be watched for in the early sta
of therapy. Other side effects, usually dose-related, h
included isolated instances of minor skin rashes, mi
menstrual irregularities, nausea, constipation, increa
and decreased libido. *Precautions:* Oral—In elde
debilitated patients, limit dosage to smallest effect
amount to preclude development of ataxia or overse
tion (not more than 10 mg per day initially, to be
creased gradually as needed and tolerated). Until
correct maintenance dosage is established, patients
ceiving this agent should be advised against possi
hazardous procedures requiring complete mental al
ness or physical coordination. Caution patients ab
possible combined effects with alcohol. Caution sho
be exercised in administering Librium (chlordiazep
ide HCl) to addiction-prone individuals. Careful c
sideration should be given to the pharmacology of a
agents to be employed concomitantly—particularly
MAO inhibitors and phenothiazines. Observe usual p
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blood counts and liver function tests may be advisat
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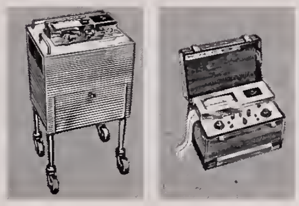

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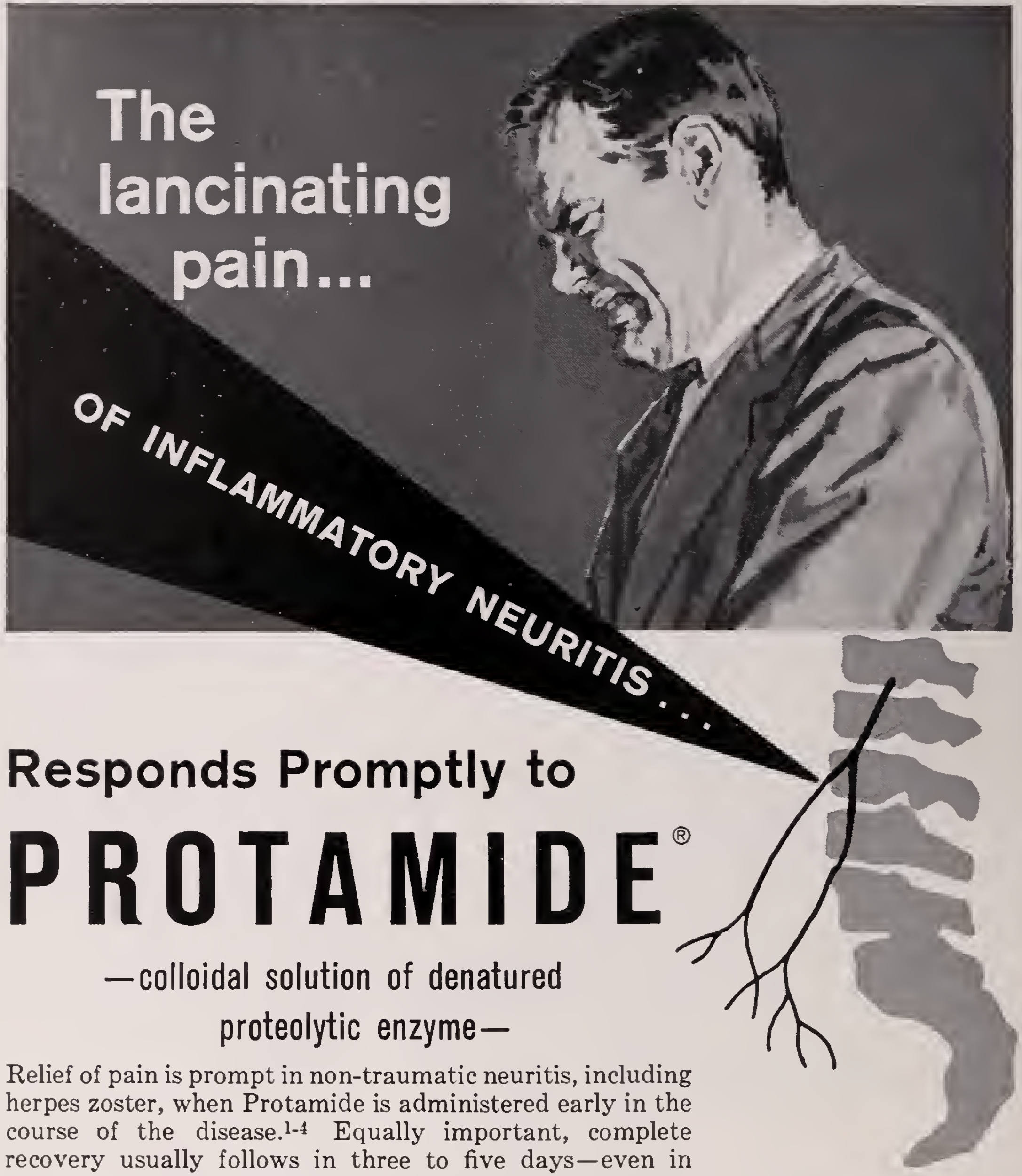
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Caution: Avoid I. V. administration. Boxes of 10 ampuls, 1.3 cc. each, for intramuscular injection.

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References: 1. Baker, A. G.: Penn. Med. J. *63*:697 (May) 1960. 2. Smith, R. T.: New York Med. (Aug. 20) 1952, pp. 16-19. 3. Smith, R. T.: Med. Clin. N. Amer. (Mar.) 1957. 4. Lehrer, H. W.; Lehrer, H. G., and Lehrer, D. R.: Northw. Med. (Nov.) 1955. 5. Sforzolini, G. S.: Arch. Ophthal. *62*:381 (Sept.) 1959. 6. Gile, J. H.: W. Virginia Med. J. *59*:120-122 (May) 1963.

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A safe effective cerebral stimulant and vasodilator for your forgetful aging patient. On Cerebro-Nicin therapy, your patient shows improvement in social activity and relationships, and greater concern with personal appearance.

FORMULA:

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Nicotinic Acid	100 mg.
Niacinamide	5 mg.
Vitamin C	100 mg.
Thiamine HCl	25 mg.
Riboflavin	2 mg.
Pyridoxine	3 mg.
1-Glutamic Acid	50 mg.

INDICATIONS: Apathy, dizzy spells, mild behavior disorders, mental confusion, functional memory defects.

AVERAGE DOSE: One capsule three times daily.

AVAILABLE: Bottles of 100 and 500 capsules.

CAUTION: Most persons experience a flushing and tingling sensation after taking a higher potency niacin-containing compound. As a secondary reaction some will complain of nausea and other sensations of discomfort. This reaction is transient and is rarely a cause for discontinuance of the drug if the patient is forewarned to expect the reaction.

WARNING: Contraindicated in the presence of epilepsy.

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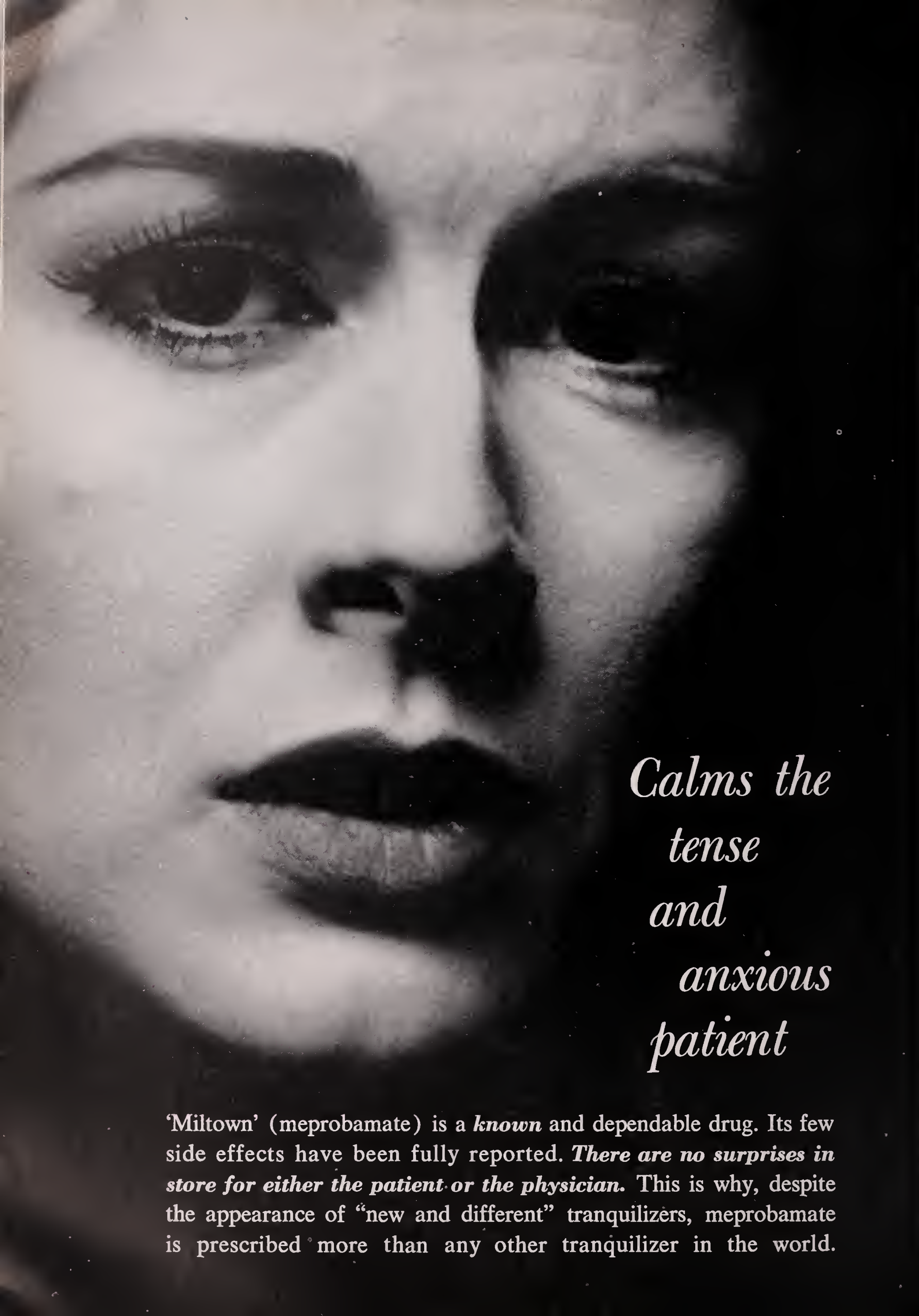
Calms the tense and anxious patient

'Miltown' (meprobamate) is a ***known*** and dependable drug. Its few side effects have been fully reported. ***There are no surprises in store for either the patient or the physician.*** This is why, despite the appearance of "new and different" tranquilizers, meprobamate is prescribed more than any other tranquilizer in the world.

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Outstanding Record of Effectiveness and Safety

1. Relieves anxiety and anxious depression in a broad spectrum of clinical conditions.
2. Doesn't leave patients "too groggy" to work or think or learn.
3. Relaxes both mind and skeletal muscle. Relieves physical tension as well as emotional stress.

Slight drowsiness may occur with meprobamate and, rarely, allergic reactions. Meprobamate may increase effects of excessive alcohol. Use with care in patients with suicidal tendencies. Massive overdosage may produce coma, shock, vasomotor and respiratory collapse. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction. Withdraw gradually after prolonged use at high dosage.

Usual dosage: 1 or 2 400 mg. tablets t.i.d.

Supplied: 400 mg. scored tablets, 200 mg. sugar-coated tablets; bottles of 50.

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because of its efficacy, outstanding record of safety...and its excellent flavor which makes administration a pleasure instead of a project

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"Against those species usually regarded as penicillin-sensitive, benzylpenicillin [penicillin G] is unquestionably the most active..."* Such is the quality of penicillin G in exacting comparative studies with five other penicillins. Prescribe Pentids [penicillin G potassium], a most effective penicillin, with a dosage form to meet every need.

Precautions: Untoward reactions to oral penicillin are essentially limited to sensitivity phenomena. They are most likely to occur in individuals with a history of allergy, and in those with previously demonstrated penicillin hypersensitivity. Anaphylactoid shock is rare. Evidence of possible overgrowth by non-susceptible organisms should be watched for during therapy. In case of serious anaphylactoid reactions, epinephrine, oxygen, and intravenous corticosteroids are required immediately.

Dosage: 400,000 units t.i.d. Supply: Tablets *(400,000 u. penicillin G potassium buffered with calcium carbonate)* bottles of 16 and 100. Capsules *(400,000 u. penicillin G potassium)* bottles of 50. Syrup *(400,000 u. penicillin G potassium/5 cc. with sodium phosphates as buffers)* bottles for reconstitution to 80 cc. and 150 cc. For full information, see your Squibb Product Reference or Product Brief.

*Barber, M., and Waterworth, P. M.: Brit. M. J. I:1159 (April 28) 1962

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What teaching?

Editor, NORTHWEST MEDICINE:

On July 12 and 13 I voluntarily sacrificed two days of earnings, in addition to unmet office overhead costs, to find out for myself just what the University of Washington School of Medicine is doing in the way of educating practicing physicians, and particularly on the subject of skin disease, where there is pressing need for education. As is well known, skin disease accounts for a substantial proportion of visits by patients to doctors; it creates much disability and expense in industry; and it gives rise to unbridled hawking of questionable nostrums for self-treatment of itches in advertising columns of newspapers.

The occasion was a two-day course given ostensibly to instruct the state's physicians. At the course, given in the Health Sciences Auditorium, I counted twenty persons present (the average of several counts), hardly enough to fill two rows. (A smaller room could of course have been used, since almost all registration was done well in advance and there is little utilization of classrooms in summer). The faculty (included in the above twenty) consisted of eleven teachers, of whom not all were present at any given time. Among the registrants were: one dermatologist in addition to myself, a gastroenterologist, an internist, a plastic surgeon, and a public health administrator:—this group should be considered auditors, for whom the subject matter is either elementary or esoteric and thus irrelevant to actual practice. There were three or four strange faces, but not one general practitioner did I identify there. (It so happens that I enjoy the acquaintance of numerous general men, who, I know, would welcome a genuine opportunity to learn some usable dermatology).

The visiting professor, imported from the East Coast for our suppositous benefit, discussed his pet theories anent studies on tadpoles, frogs, guinea pigs, and *in vitro* experiments. This man had the grace to admit freely that (1) his work was not necessarily applicable to human beings, and that (2) he had nothing in the way of clinically useful information to impart. Were this man a professor of zoology, or physiology, or experimental pharmacology, I would take my hat off to him. I have deep respect for pure science, and I do not measure all knowledge in terms of usefulness, although I stoutly maintain that clinical medicine is a useful art and not a science. But this man is a professor of medicine: a theorist who controls teaching in a pragmatic field. Such an appointment seems to be a commonplace nowadays: a device for attracting medical research money into activities unrelated to clinical medicine. This phenomenon was vividly impressed on me during the lordly two-hour lunch break, during which I went out and inspected the grand new primate center under construction. (The word "primate," I suspect, has something to do with monkey business).

Presiding over the course in the capacity of head of the medical school's department of dermatology, was a personable young fellow of whose qualifications I know little, since I do not find his name listed in the *Directory of Medical Specialists.*

So much for the 1963 offering in dermatologic teaching at the U. of W. School of Medicine. The previous year, 1962, saw a similar offering with very similar attendance and proceedings. Prior to 1962 there was not even a pretense at dermatologic teaching, though the school had been in full operation more than a decade.

Does the apparent lack of interest indicate that practicing physicians do not wish to learn? My own observations emphatically indicate the contrary. Just a few weeks earlier it was my pleasure to attend an excellent instructional session sponsored by the King County Academy of General Practice. An enthusiastic turnout of several hundred specialists and G. P.'s spent an afternoon as valuable as it was enjoyable.

The simple fact is, that the U. of W. instruction, meager and paltry as it is, is poorly attended because (1) the professors are incapable of teaching usable clinical medicine, and (2) the teaching methods are obsolete in these days of high overhead and living costs. A registrant in a medical school course of the sort I am criticizing must first of all pay a substantial tuition fee. He forfeits his earnings, while his overhead comes due whether he is in his office or not. An out-of-town registrant, in addition, incurs travel, hotel, and meal expense. Yet physicians would cheerfully face such losses and expenses and inconveniences, had not experience of past years taught them that one can learn more from one's patients than from fiat professors, who, never having practiced themselves, are presumed capable of teaching those who do. And so the practitioners understandably take their two-hour lunch breaks accomplishing something useful in their offices.

At the last session of the legislature, a spokesman for the medical school protested that it was

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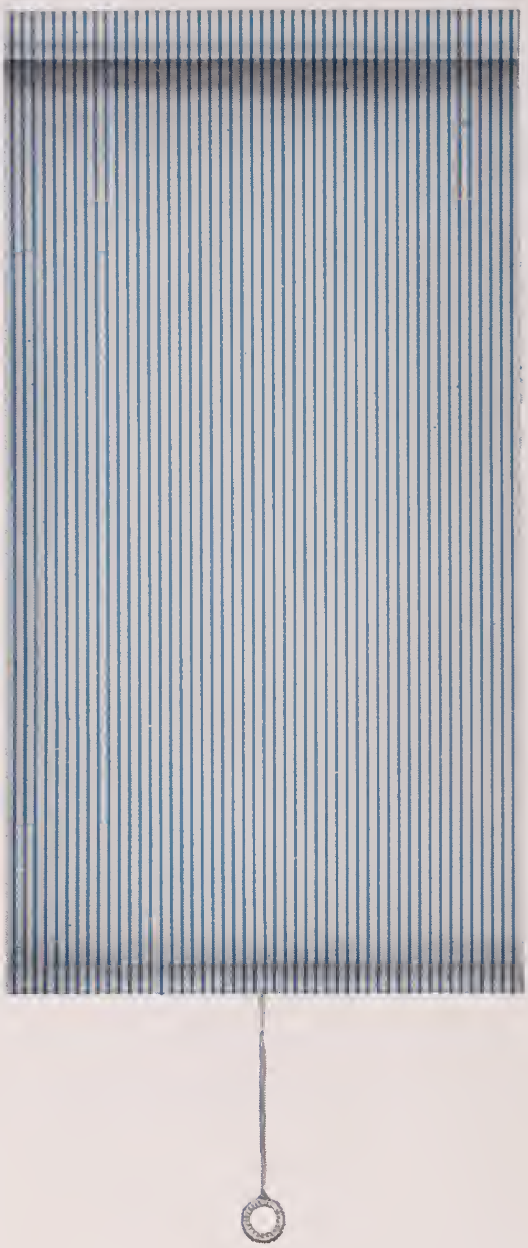

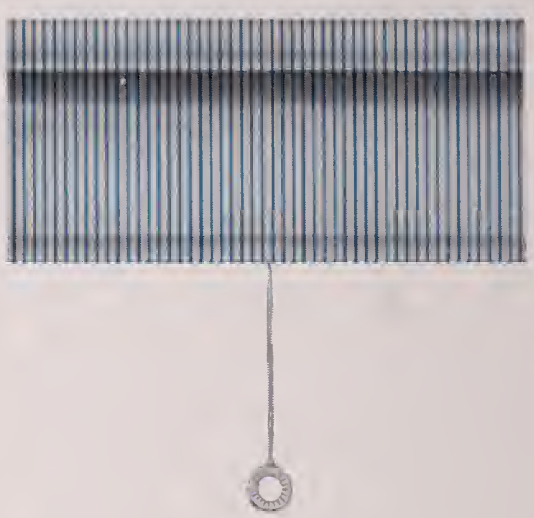

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Awake at seven
(without "hangover")

For a good night's sleep without barbiturate side effects: Doriden (glutethimide)

Patients sleep soundly up to 8 hours and awake refreshed with Doriden (glutethimide). In addition, they benefit from its specific advantages over barbiturates:

- rarely causes pre-excitation; onset of action is smooth
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- not contraindicated in the presence of liver and kidney disorders
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- rarely depresses respiration

AVERAGE DOSE: 0.5 Gm. at bedtime. Total daily dosage over 1 Gm. not recommended for continuing therapy.

CAUTION: Careful supervision of dosage is advised, especially for patients with a known propensity for taking excessive quantities of drugs. Excessive and prolonged use of glutethimide in susceptible persons, for example, alcoholics, former addicts, and other severe psychoneurotics, has sometimes resulted in dependence and withdrawal reactions. In those cases, dosage should be reduced gradually to lessen the likelihood of withdrawal reactions such as nausea, abdominal discomfort, tremors, or convulsions.

SIDE EFFECTS: Occasional reversible skin rash and nausea.

SUPPLIED: *Tablets,* 0.5 Gm., 0.25 Gm., and 0.125 Gm. *Capsules,* 0.5 Gm.

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continued from page 583

absolutely necessary to have an inflated staff of highly paid professors (up to $24,000 a year); to provide them with rent-free offices for private practice, paid vacations, travel expenses, and lots of other plums, in order to secure their allegedly valuable services for top-quality "teaching and research." Obviously there is plenty of research, some of which seems to come under the head of boondoggling. But about the teaching, now. My question is, What teaching?

Very truly yours,
ARTHUR BOBROFF, M.D.
418 Medical Dental Bldg., Seattle, Wash.

Saskatchewan's Confidence Game

EDITOR, NORTHWEST MEDICINE:

Are reprints available of original articles in NORTHWEST MEDICINE? Specifically, Saskatchewan's Great Confidence Game in the July, 1963 issue. If so, I would like to have twenty reprints. This article ought to be required reading for every physician, "politician," every science major in every college on the North American continent. If reprints are not available, is permission granted to copy the article for distribution to my local political groups?

THOMAS S. GILPATRICK, M.D.
Spokane, Washington

EDITOR, NORTHWEST MEDICINE:

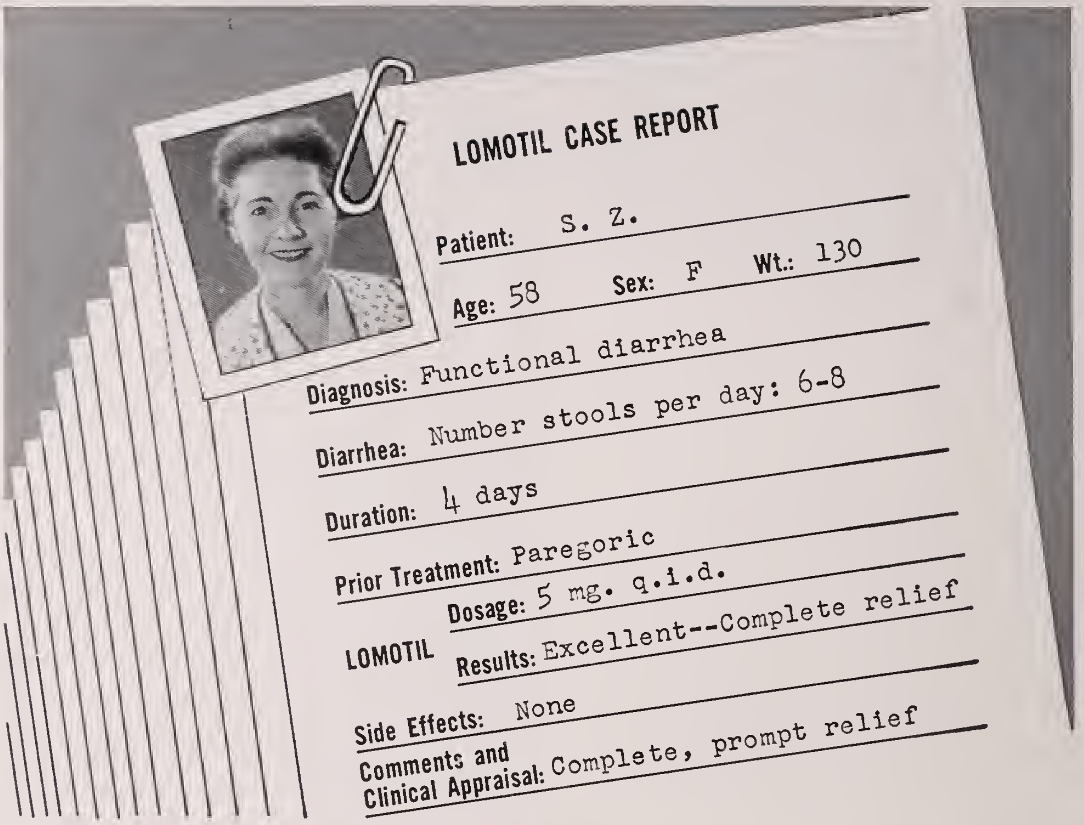
I am very interested in the article printed in NORTHWEST MEDICINE for July, 1963, titled "Saskatchewan's Great Confidence Game."

I should like very much to have some reprints of this article but find no place in your magazine which refers to this situation. I should like to have about 25 copies of this reprint.

FRED C. HOPP, M.D.
Yakima, Washington

Many similar letters have been received. It is customary for authors to obtain and distribute reprints and the process is facilitated by publishing the author's office address at the end of each article. Each author receives 100 free reprints of an article published in the Original Articles Section and some purchase additional copies but seldom are able to supply more than one reprint per request. Quantity requests are always referred to the editorial office and usually require special order to the printer for the number desired. In this case, however, due to heavy demand, we have ordered a substantial supply and will fill all orders directed to the editorial office. It should be noted that copyright is held by Dr. Leitch as well as by NORTHWEST MEDICINE. *He has granted permission to issue reprints.*

Reprints of the Saskatchewan article are 25 cents each, $20.00 per hundred. Address requests to, Northwest Medicine, 500 Wall Street, Seattle 1, Washington, and make checks payable to Northwest Medical Publishing Association. Ed.



LOMOTIL CASE REPORT

Patient: S. Z.

Age: 58 Sex: F Wt.: 130

Diagnosis: Functional diarrhea

Diarrhea: Number stools per day: 6-8

Duration: 4 days

Prior Treatment: Paregoric

LOMOTIL Dosage: 5 mg. q.i.d.

LOMOTIL Results: Excellent--Complete relief

Side Effects: None

Comments and Clinical Appraisal: Complete, prompt relief

To control diarrhea ... promptly

prescribe LOMOTIL® promptly

Each tablet and each 5 cc. of liquid contains: 2.5 mg. of diphenoxylate hydrochloride (Warning: may be habit forming) and 0.025 mg. of atropine sulfate

The direct, well-localized activity of Lomotil relieves spasm and cramping and provides prompt symptomatic control of virtually all diarrheas.

Numerous investigators have remarked on the effectiveness of Lomotil in patients with diarrhea uncontrolled by other agents.

Weingarten and his associates[1] found it "an excellent drug . . . efficacious where other drugs have failed. . . ."

Hock[2] obtained "results superior to prior medications in 68.3 per cent of 41 patients."

Since Lomotil controls diarrhea so consistently, it is only rational to prescribe Lomotil *before* other agents have a chance to prove inadequate. To control diarrhea promptly, prescribe Lomotil promptly.

Lomotil is an exempt narcotic, its abuse liability being comparable to that of codeine. Recommended dosages should not be exceeded. Side effects are relatively uncommon but among those reported are gastrointestinal irritation, sedation, dizziness, cutaneous manifestations, restlessness and insomnia. Lomotil should be used with caution in patients with impaired liver function and in patients taking addicting drugs or barbiturates. Lomotil is brand of diphenoxylate hydrochloride with atropine sulfate; the subtherapeutic amount of the latter is added to discourage deliberate overdosage.

1. Weingarten, B.; Weiss, J., and Simon, M.: A Clinical Evaluation of a New Antidiarrheal Agent, Amer. J. Gastroent. 35:628-633 (June) 1961. 2. Hock, C. W.: Relief of Diarrhea with Diphenoxylate Hydrochloride (Lomotil), J. Med. Ass. Georgia 50:485-488 (Oct.) 1961.

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Research in the Service of Medicine

Abstracts in Spanish

Developments in transportation, communication, and world politics are rapidly bringing about great need for a language common to all races and all nations. Until the world speaks with one tongue, however, it is necessary for many individuals to understand more than one language. In this hemisphere there is very great need for many to understand both English and Spanish. We, our friends to the South, and our close colleagues in Puerto Rico, will have increasing need to communicate, to transfer ideas, and to understand each other's problems.

Since medicine offers rich opportunity for sharing of experience and exchange of ideas, it seems particularly important for physicians of the hemisphere to develop every possible means of communication. The barrier of language ignorance should be wiped out. Physicians can, and should, be leaders in the endeavor.

Spanish has, therefore, been chosen as the second language in which to publish abstracts of the articles appearing in this journal. Also considered were Latin, Esperanto, and Interlingua. There are good arguments for use of any one of these, and all have possibilities of universal recognition. Under present world conditions, however, the great and growing need for hemispheric rapport far outweighs any need for universality.

This journal now goes to a number of Latin American schools, hospitals, and individuals, as well as to journals in exchange. It is expected that the list will increase and that more Spanish language journals will be received. Gleanings from the best of these will be translated and published from time to time.

Our main purpose, however, is simply to cultivate friendship with our neighbors. Therefore—*Presentamos saludos a nuestros amigos y colegas de América Latina, y esperamos aumentar la amistad entre todos los médicos del hemisferio.* (We greet our friends and colleagues of Latin America and hope that friendship will grow between all doctors of the hemisphere.)

Drug Research Continues

Pharmaceutical manufacturers spent $251 million on research and development last year, almost all from private funds. This is in marked contrast to the all-industry expenditure, 58 per cent of which comes from government sources. Rate of spending on research by drug firms more than doubles that of industry and ratio of scientists employed is also much higher.

The amount spent on research has risen at about 15 per cent each year, until 1962, when the total increased but there was some reduction of rate. Slowing was due to the Kefauver investigations and new legislation imposing stricter controls on the production of drugs.

Tests were made on more than 168,000 substances and 9 million animals were used during 1962. Nearly 90 per cent were mice and rats but researchers also used guinea pigs, hamsters, rabbits, chickens, turkeys, dogs, cats, and monkeys. About 10 per cent of the work was done on possible products for veterinary medicine, the remainder on those for human use. Major emphasis was on hormones, antibiotics, chemotherapeutic agents, psychopharmacologic drugs, cardiovascular and hematologic agents, analgesics and anesthetics.

Sales continue to mount in spite of adverse publicity and restrictions imposed by new legislation. Total drug industry sales were $3.2 billion in 1962, including $756 million in foreign sales.

The data are from a report by Austin E. Smith, M.D., President of the Pharmaceutical Manufacturers Association.

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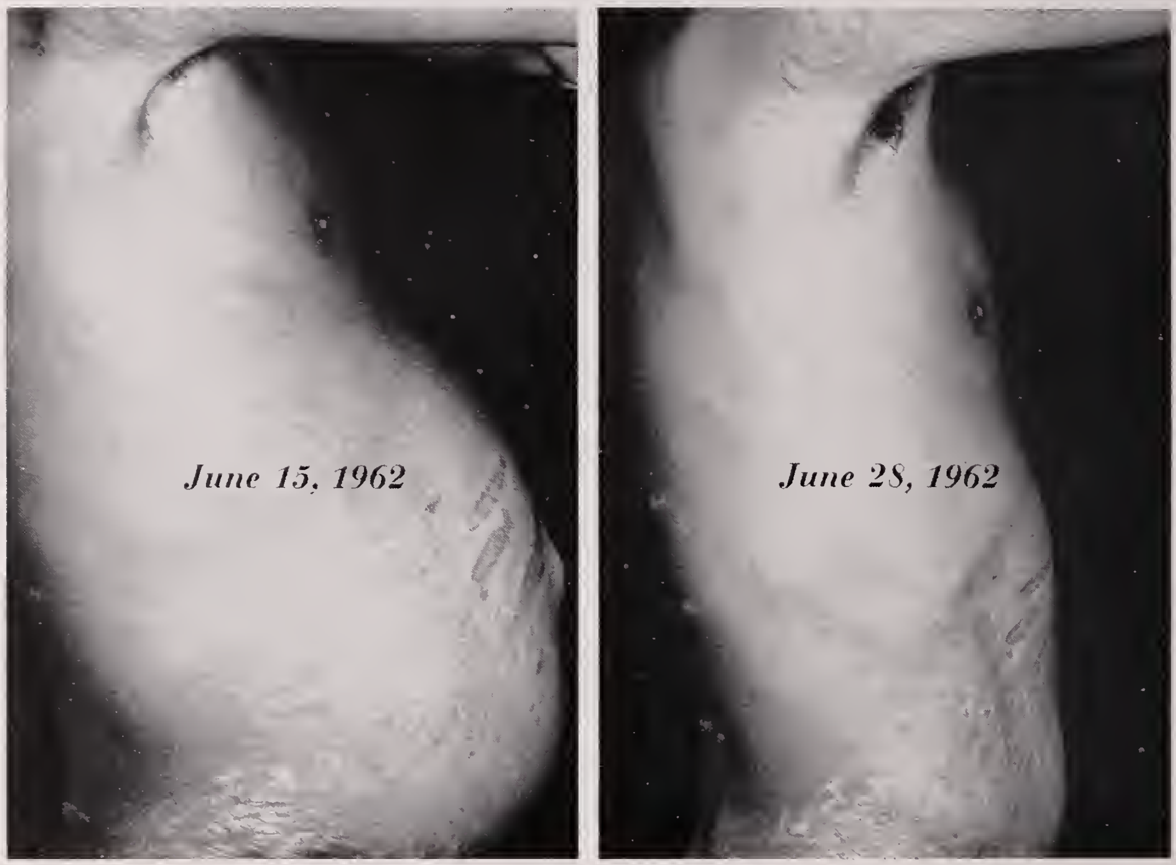

Patient was admitted with nephrotic syndrome evidenced by ascites, peripheral edema, proteinuria, hypoproteinemia, and hypercholesteremia. Treatment with Haldrone, 4 mg. every six hours, was begun on May 28, 1962, and seven days later the dosage was increased to 6 mg. every six hours. A brisk diuresis occurred on June 17. The amount of Haldrone was then reduced to 2 mg. every six hours. On June 27, the patient reached a dry weight of ninety-seven pounds (a forty-six-pound loss since the beginning of treatment), and he was discharged as satisfactory on July 4, 1962. He has since been maintained in remission on 2 mg. Haldrone t.i.d.

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Lilly

Tanana Revisited

MILO H. FRITZ, M. D., Anchorage, Alaska

The history of medicine contains many stories of physicians who have had excellent ideas for the improvement of human health which at the time were not accepted by their fellow physicians. One instance is that of Semmelweis[1] who clearly recognized the cause of so-called child-bed fever in Vienna as being due to the lamentable habit of obstetricians examining their patients without washing hands or changing clothing after attending an autopsy or coming in from the street. Semmelweis' idea regarding this frightful contagion were not accepted during his lifetime. They, of course, proved to be absolutely accurate, but only after his tragic death from infection and mental illness.

I make no claim to the eminence history has accorded Semmelweis. But, there is some resemblance between the non-acceptance of his ideas regarding puerpural fever and the rejection of my own regarding the connection between the non-performance of tonsillectomy and adenoidectomy, when indicated, and the widespread and tragic prevalence of mastoiditis and middle ear disease in Alaska.

unrecognized problem

A few months after coming to Alaska, in January, 1940, fresh from my graduate training in EENT at Duke University, it became indisputably clear that the reason for so much mastoiditis in southeastern Alaska at that time was the non-recognition of the indications for doing tonsillectomy and adenoidectomy.

By submitting reports to the Territorial Commissioner of Health and representatives of the federal government in charge of native health, I hoped to bring attention to the connection between mastoiditis and middle ear disease and the need for doing tonsillectomy and adenoidectomy, when indicated, to those in authority. But, in the eighteen months time of my stay in private practice in 1940 and 1941, I was unable to gain acceptance for this important concept, recognized by properly trained otolaryngologists since about 1890.

Two and one-half years' duty throughout the Territory of Alaska during World War II disclosed that middle ear disease and mastoiditis were not confined to southeastern Alaska but were prevalent to a frightening degree throughout the Territory. Deaths from meningitis, brain abscess and labyrinthitis, all of otitic origin, were not recognized as such by any of those in charge of public health in the Territory and, to my knowledge, by only one physician in private practice, namely, Fred M. Langsam of Nome.

further investigation

At the end of World War II, and after two years of research in New York City, I was given the opportunity of joining a nutritional survey team under the Alaska Territorial Department of Health, whose chief at that time was the imaginative and energetic C. E. Albrecht, an old friend, and the first full-time commissioner of health for Alaska.

On this trip in the spring of 1947 the lethal and alarming prevalence of suppurative diseases of the middle ear and mastoid bone with its dreadful complications was even further disclosed. A detailed report of these findings and the recommendations that tonsils and adenoids be removed, when indicated, throughout the Territory, was submitted to Dr. Albrecht.

The year following this survey trip, I returned to Alaska and established practice in the city of Anchorage. Again, I undertook the task of establishing recognition of tonsil-adenoid disease as the source of middle ear-mastoid infection. I brought it to the attention of officials in the Alaska Territorial Department of Health, the Alaska Native Service, the Children's Bureau in Washington, D. C., the Bureau of Indian Affairs, and other federal, territorial and private agencies, part of whose energies were, or should have been, devoted to the eradication of this preventable type of hearing loss, infection and, often, death.

an early attempt

Dr. Albrecht, assailed by many problems, lent a sympathetic ear and entered into contractual arrangements with several Alaskan physicians in private practice for holding operative clinics throughout the Territory, sometimes with the cooperation of the Alaska Native Service, and sometimes without it, sometimes in their hospitals, sometimes not. The physicians who participated in this effort in those days in the late forties and early fifties were Fred M. Langsam of Nome, Hugh B. Fate of Fairbanks, Joseph H. Shelton, now of Anchorage, and myself.

With Dr. Albrecht's resignation, the ENT program fell upon evil days. Those following Dr. Albrecht in his important post had little imagination, less courage, and virtually no knowledge of otolaryngology, even though many of them were physicians and all of them had access to the reports submitted by others, as well as myself, regarding what has briefly been described. Endless, repeated conferences were held on matters that have been well understood by otolaryngologists since the turn of the century. The situation deteriorated to the point that great educational effort was required whenever representatives of federal or territorial, and later state, agencies came to Anchorage. In order to acquaint them with the problems of mastoiditis, middle ear disease, deafness and the importance of tonsillectomy and adenoidectomy, it was necessary to give them something like a "quickie" course of four years in medicine plus an ENT residency before they reached the point of comprehending the problem.

incompetence

The Parran Report,[2] the AMA Report,[3] the Alaska Territorial Department of Health Report,[4] all substantiated what has been outlined. They made clear what had to be done, and yet the officials of federal, territorial, and later state, agencies who should have been vitally interested in this program seemed to use every means at their disposal for delaying what Dr. Albrecht in his wisdom and imagination had allowed us to start. Eventually, incompetence succeeded in terminating all ENT work except sporadic and so-called crash efforts on the part of imported ENT men who occasionally held unscheduled and very inefficient mass operative clinics here and there throughout Alaska.

change in administration

Happily, a few years ago, the Indian Bureau was taken out of the medical business in Alaska and ceded its medical problems to the United States Public Health Service. With this change in administrative responsibilities for native health, those of us interested in the problem of mastoiditis, middle ear disease, deafness and a tonsil-adenoid program hoped that a better day was at hand. For two or three years this appeared not to be the case. For instance, it was necessary for me, at my own expense, to go to the Mission at St. Mary's and do seventy-one operations in five days, administering my own anesthetics.

In 1961, my wife, Mr. John Spahn, an optician, Dr. Nancy Sydnam, and I undertook a one month EENT Clinic at eight native villages entirely at our own expense. The St. Mary's Clinic and the Yukon Clinic resulted in the publication of an editorial[5] and an original article[6] in NORTHWEST MEDICINE which pointed out the appalling preventable EENT conditions in Alaska. They were widely publicized outside the field of medicine. In fact, the editorial from NORTHWEST MEDICINE entitled, "A Clinic to St. Mary's," appeared on the editorial pages of 600 civilian newspapers throughout the country. It was also read into the *Congressional Record.*[7] It resulted in the Surgeon General of the United States Public Health Service, Luther Terry, being forced to recognize the problem in a negative way by publicizing the amount of money I had earned as a consultant to the USPHS, with the implication that anyone who had earned this amount of money really had no right to complain about the type of service. Happily, this in no way deceived those who were now being converted to the idea, accepted by Albrecht many years ago, that to eliminate suppurative middle ear and mastoid disease tonsillectomies and adenoidectomies would have to be done, when indicated, regardless of numbers.

in the public interest?

Throughout these years, until the Clinic to St. Mary's and the Yukon Clinic proved otherwise, the officials in charge of the native hospitals throughout the state repeatedly claimed that doing tonsillectomies and adenoidectomies in their small hospitals was dangerous and not in the public interest. I did this demonstration at St. Mary's and on the Yukon to show that this work could be done safely, even without an anesthetist and outside a hospital.

I would not have the reader believe I feel that my efforts alone have resulted in the unbelievable transformation that I witnessed in Tanana during the week beginning 15 April 1963, but I like to think that the work undertaken at St. Mary's and in the Yukon Clinic resulted in widespread dissemination of the problem in the lay press: that it was a big factor in gaining acceptance for the idea of getting the work done safely in the satellite hospitals.

I have recommended, in reports and scientific articles, that each satellite hospital and medical officer-in-charge be given the medical responsibility for smaller villages surrounding the town in which the hospital is located. It would be far cheaper to bring individuals needing tonsillectomy-adenoidectomy and other routine types of surgery into these hospitals at scheduled intervals than to bring them into the larger medical centers at Anchorage and Fairbanks. I also advocated repeatedly that sending out Alaskan contract physicians in private practice to these hospitals at regular intervals would be far more efficient than importing people from the South 48 for whom the transition from medical center atmosphere to the bush of Alaska was sometimes so great that they could hardly function at all when they got here. The use of civilian contract anesthesiologists and anesthetists was also strongly recommended.

The great satisfaction to me, therefore, is in finding that virtually every one of these recommendations has been accepted. Through the recognition of the validity of these claims on the part of its officials, the United States Public Health Service has started a realistic program that tackles the problems of infected tonsils and adenoids, suppurative middle ear diseases and mastoiditis in a manner proportional to the number of individuals so afflicted. The importance of saving lives and the sense of hearing, especially among the young people of our state is now recognized.

Alaska Native Health Service

In the middle of January, C. E. Chenoweth, J. H. Shelton, M. J. Shoff and myself were invited to attend a conference with medical officials of the Alaska Native Health Service (USPHS). Jack Lesh of the Division of Maternal and Child Health and Crippled Children's Services of the Alaska Department of Health also attended. We discussed establishment of arrangements for doing tonsillectomies and adenoidectomies at the satellite hospitals of the Alaska Native Health Service at Mt. Edgecumbe, Kanakanak, Tanana, Kotzebue, Barrow and Bethel. Present not only were the four civilian physicians but also K. Kasuga, medical officer in charge of the entire United States Public Health Service program in Alaska, his medical administrative deputy, H. R. Wherritt, and Leslie Thomasson, recently imported Chief of ENT for the Alaska Native Health Service. Dr. Thomasson recognized that the problem was far greater than he alone could cope with. The upshot of this conference was that Drs. Shelton, Shoff and I agreed to undertake periodic tonsil-adenoid clinics in the smaller hospitals, assignments to be made by Dr. Thomasson on the basis of the needs as he saw them with the additional proviso that Dr. Shoff and I would do mastoidectomies in Anchorage and possibly at Mt. Edgecumbe when the occasion arose and means for doing this safely could be worked out. Dr. Lesh agreed to recruit civilian anesthesiologists and anesthetists and, if possible, to assist the contract surgeons in the field.

limited funds

Soon after this conference, each of us received a copy of the proceedings from Dr. Lesh. Accompanying it was a letter pointing out that if each of the consultants were paid the legally established fee of $65 for each tonsillectomy-adenoidectomy performed, very few could be done because of the limitation of funds. Dr. Lesh asked us therefore, if we could think of any way to spread this money further.

At our weekly meeting, we decided to reduce the fee to $20 per patient. All of us felt that, for the first time since Dr. Albrecht left, both the state and federal agencies recognized that we were men of good will, motivated by the welfare of our fellow Alaskans and were as dedicated and sincere in our own way as the medical officers of the federal and state medical departments were in theirs. For the first time since Albrecht's departure, we felt that we were being accepted as equals, as fellow workers in the vineyard, and that we were being accepted as members of a team and not reluctantly as interlopers or creatures of convenience.

brighter outlook

The first field trip to be made under this new and happy arrangement was by M. J. Shoff who spent a week at Kotzebue. He did over 50 cases and was very well pleased with the reception accorded him and the quality of the work that he was able to turn out.

I went to Tanana in my own airplane rather than by commercial air transportation which was allowed through the recently consummated contract.

I had been at Tanana on several occasions before, the last being several years ago. The change in the physical setup, the attitude of the medical officer-in-charge, the morale of the personnel, the interest of the people in the village in this effort, and the cooperation of bush pilots, commercial airlines, the FAA, the churches and the ordinary citizens of this small community were, to me, virtually stunning and almost unbelievable.

The medical officer-in-charge, Rollin Pederson, was obviously pleased when he picked me up at the airstrip in a driving snowstorm. I had with me eight sets of instruments and had taken disposable drapes in the interest of saving time and lessening the strain on laundry facilities. Arriving at the hospital, I found the walks swept, the building in an excellent state of repair, sparkling in the fading light of a dull and snowy dusk. Inside, the floors shone, and the laboratory workers, nurses, nurses' aids and other personnel wore proper uniforms or civilian clothes. They were pleasant, obliging, and polite to one another as well as to the stranger on their doorstep.

Conference with Dr. Pederson and his chief nurse, Miss Margaret Clarke, resulted in the decision to do eight operations a day, indicated as being desirable from the logistics aspect by letter previously. Four were to be done in the morning and four in the afternoon. All of us recognized that the unseasonably bad, snowy weather might interfere with our plans. I was given the opportunity of doing the ENT examinations of fourteen youngsters ranging from fifteen months to eleven years.

cooperation

The city of Tanana, on the north bank of the Yukon River five miles below its junction with the Tanana River, has a population of 300. The wood frame hospital is rated at a 30-bed capacity. The patients were to be admitted the day before their surgery and discharged the day following. The weather could not be counted upon to cooperate, so arrangements were made with the FAA (Federal Aviation Agency) colony and the people of Tanana to participate by providing foster homes for twenty-four hours or until the children could be flown back to their home villages. These were Fort Yukon, Chalkyitsik, Hughes, Huslia, Arctic Village, Allakaket, Tetlin, Venetic, Tanana and Ruby.

The hospital census was always greater than thirty, and, owing to the vagaries of the weather, once reached forty-four! It was necessary in some instances to put two children in a bed. This was recognized by everyone as hardly being ideal, but with the new resiliency and willingness to make do with the best at hand, everyone was taken care of. Nobody was the worse for adjustments made necessary by inadequate transportation, limited housing and crowded medical facilities. The monolithic rigidity and strict adherence to the letter of regulations compiled in Washington, D.C. was never in evidence. This was perhaps the most remarkable change I saw at the Tanana Hospital.

It became increasingly evident how things had changed since the last time I had seen Tanana. Supplies and modern instruments and means of treatment were in evidence everywhere. Dr. Pederson, in spite of the additional load put on his shoulders by this clinic, ran a heavy outpatient clinic every day, successfully looked after an active obstetrical service and, in the manner of a good general, kept an administrative eye and ear on the transportation and logistic problems connected with foster home care for children already operated upon and the time of arrival of those yet to be done.

weather problems

The weather worsened and Mr. Marc Stella of Nenana Air Taxi was once obliged to fly 800 miles before he was able to complete a 105 air-mile trip between two of the communities where he was to pick up children. In one place, his Cessna 180 went into the fresh, deep snow up to the wings and required many hours of shoveling, snowshoe work, and the combined efforts of twenty men and two dogteams to get the plane squared away once more so that it could fly.

On one day, it became necessary to do thirteen cases instead of eight, because a freak break in the weather made it possible for two bush carriers to get in their loads of kids on the same day instead of on successive days, as had been originally planned. But, this change of plan was accepted by all in good spirit, and though it taxed the hospital facilities to the limit, the crisis passed when those previously operated upon were sent out to their surrounding foster homes the following morning.

I could not help but be impressed again by the touching and beautiful faith exhibited by the parents of these children, who entrusted them to the sturdy and well-recognized integrity of the bush pilots and to the care of nurses, physicians and nurses' aids, mostly unknown to them except by reputation.

foster homes

I had the opportunity of visiting the foster homes where the children went the day following their surgery. All the women in the homes where these young patients stayed were pleased at the part that they were taking in this community effort. They expressed surprise at the little trouble that these wonderful children caused at this rather unhappy time in their convalescence.

The mess hall of the hospital had also been, along with everything else, completely revamped. Both cooks were native men and wore proper chefs' uniforms, complete with caps. Dishwashing and food handling arrangements were of the very highest quality; the food was ample, tastefully prepared and nicely served. There was no segregation—everybody sitting where he liked, whether he was an engineer, a carpenter, a physician, a visiting bush flyer, a secretary or a nurse's aid. In forty-eight hours, everybody knew everybody else and it is hard to describe, in a document such as this, the warm feeling of being part of a team that this democracy engendered.

improved dental program

While operating upon the children, a process which went along with a minimum amount of trouble, I could not help but notice the result of a continuous and reasonable dental program instituted by the United States Public Health Service. Prior to this clinic, it had frequently been necessary to pull three or more teeth from each patient. In all of the forty-four patients upon whom I operated, Monday through Friday (15-19 April) inclusive, only one tooth had to be extracted, and this was the result of nature's decision to cast off a deciduous upper central incisor, not the result of neglect. It was a pleasure to observe the presence of plentiful and neat, amalgam fillings. Only one case of gingivitis was noted, which is hardly different from what would be observed in a comparable group of white children operated upon say in Anchorage or Fairbanks.

pride

In Navy terms, the Tanana Hospital could be called a taut and happy ship. It was run in a businesslike and efficient fashion, but at the same time the staff members managed to preserve a feeling of friendliness, interest and enthusiasm. No longer a besieged fortress in an alien sea, it was part of the community of Tanana; the FAA, various church groups, and citizens of Tanana were proud of the hospital and what it was doing for the children of Tanana and its satellite villages.

The gasoline problem for my airplane was solved through kindness and courtesy of a member of the hospital staff, Mr. Kenneth Slifer, a full time carpenter working in the hospital area. Learning that I needed a certain type of aviation gas to suit my plane and realizing that it was unavailable in Tanana, he sold me thirty gallons. He helped me transport it from his cache on his Snowtraveller to my airplane, a good half-mile away, and then helped me put it in the tanks.

minor crises

The only difficulty we had was post-operative bleeding on the part of the fourth patient done on the first morning. I regretted this, because I felt that it might discourage Dr. Pederson to have the first morning marred by a minor crisis. However, I was able to take the youngster back to the surgery and without further anesthesia locate and tie off the offending vessel. From that time on, excepting for a manic episode, possibly due to pentobarbital, on the part of the very last patient I did under local anesthesia —a tonsillectomy on a sixteen year old girl—there were no further difficulties with the surgery.

jarring notes

In the Tanana Hospital at this time there was not one jarring note. The presence of John Dyer, who was to undertake the itinerant work in the region served by the Tanana Hospital, brought in a refreshing change of outlook. Dr. Pederson's participation in the recent meeting of medical officers in charge in Anchorage, I feel kept him from becoming a victim of cabin fever, as some do after excessive isolation in a small community. He was about to go to New Mexico to present a case at a meeting of United States Public Health Service surgeons. This privilege of getting away from local problems from time to time, also recommended many years ago, bears fruit in permitting medical officers to return refreshed and enthusiastic to their exacting, sometimes monotonous and isolated, work.

I have no way, of course, at this stage of knowing whether this dramatic change from an indifferent institution to a first class effort, which the Tanana Hospital now certainly is, exists throughout the state. I hope that it does and feel that certainly the policies at the higher levels must have changed to allow this transformation. Now that doctors are relatively more scarce than ever before, owing to the availability of medical care to many people who otherwise would not have had it through union, health and welfare plans and insurance plans involving other large segments of the population, this very happy welcoming once more, of civilian consultants to government service is long overdue and certainly in the public interest. There will be jarring notes, difficult decisions and, no doubt, unpleasant incidents from time to time. However, I feel that with the new attitude on the part of the government service toward its consultants and continued determination on the part of the consultants to give their best to those who employ them cannot help but increase the stature not only of the government medical services but also the consultants themselves. It will result in incalculable improvement in the health and happiness of the patients who concern both groups.

a great privilege

I consider it a great privilege to have seen this program evolve from non-recognition of serious ENT problems in 1940 to its present excellence. I recognize that many of the things that I have said and much that I have written caused understandable anger and resentment among men of many federal and territorial, and later state, medical offices. I would not have been surprised had I been left out of this new program. I am pleased that those medical officers now in charge of our federal and state programs apparently chose to interpret my past performance as an effort, sometimes perhaps tactlessly made, toward improving the situation and, therefore, gave me the opportunity of partaking of the early fruits of victory against an implacable series of ailments. They could easily have left me off the list of civilian consultants. Thus, I would have been a spectator to a program in which I would have given anything to be a participant. This understanding attitude I most deeply appreciated.

not all solved

I do not feel by any means that all the problems in otolaryngology and ophthalmology which beset the United States Public Health Service in Alaska are solved. Just two weeks ago, a young man in his early twenties died of meningitis and brain abscess of otitic origin, the basic disease having existed since he was an infant. He came from the Dillingham area: whether or not he had been seen by a physician is unknown to me. Nevertheless, for each individual who dies of a complication of mastoiditis known to us, there must be many where the diagnosis is obscure and does not appear on the vital statistics of cause of death in our state.

conclusion

The problem of allocating realistic amounts of money for the purchase of acceptable spectacles for those who need them following proper refractions still remains to be solved. However, it is my feeling that with this new attitude of interdependence between private practitioners interested in this problem and the medical officers of the USPHS, solutions can soon be reached for these and other vexing difficulties. I also realize that the Service has problems outside the fields of ophthalmology and otolaryngology needing solution. But, with the recent control of tuberculosis in all its manifestations, the eye and ear, nose and throat problems, closely followed by the dental problem, are the most pressing ones for solution in Alaska today.

In conclusion, it seems now to this consultant at least that in the foreseeable future, mastoiditis and death from its complications will soon be as rare among the native population of Alaska as it is among the people of the South 48. ■

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Symposium on Trauma

The subject of trauma, and in particular automotive trauma, progressively assumes a position of greater importance in present-day medical practice. In recognition of this problem, a Postgraduate Symposium on Trauma was held at the University of Washington School of Medicine on May 23-24, 1963, under the sponsorship of the Department of Surgery.

The following papers represent selected portions of the material presented during this symposium. Limitation of space has made it impossible to include all of the papers, seminars and discussions.

In order to reproduce as nearly as possible the informality of this program, the material has been taken from transcriptions of the presentations. These transcriptions have necessarily been edited to some degree and it has been impossible to include more than a few of the many illustrations utilized in the various presentations.

It is hoped that this material will be of interest to the physicians of the Northwest and that the publication of these proceedings will enhance the value of the symposium.

JAMES R. CANTRELL, M.D.

The Physician and the Motorcar

HORACE E. CAMPBELL, M.D., Denver, Colorado

Physicians have always been interested in the motorcar. They promptly purchased the very first models. I vividly remember a physician being stuck in the snow in front of our house in January, 1904. In his great fur coat, high fur cap, goggles, and leather gloves with gigantic gauntlets, he seemed more to envelope his little, red, one-cylinder Cadillac, with neither top nor windshield, than to be contained in it. His utterly smooth gray-rubber tires spun hopelessly. I

abstract

CAMPBELL, HORACE E. (Automobile Safety Committee, Colorado Medical Society, Denver, USA) the Physician and the Motorcar. Northwest Med 62: 595-597 (Aug) 1963.

Data reveal that more than 60 per cent of fataly injured drivers had been drinking. In Norway it is illegal to drive or try to drive if blood alcohol is more than 50 mg per 100 ml. In the United States one is not legally drunk if blood alcohol is less than 150 mg per 100 ml. In a person weighing 165 pounds, this is the eqivalent of 6 ounces of 100 proof whiskey actually circulating in the bloodstream. It is the moral responsibility of the medical profession to promote and support legislation aimed at curbing vehicle accidents due to consumption of alcohol by the operator.

abstracto

CAMPBELL, HORACE E. (1612 Tremont Pl., Denver, Colorado, USA) The Physician and the Motorcar. Northwest Med. 62:595-597 (Aug.) 1963.

Estatísticas revelan que mas del 60 por ciento de choferes fatalmante lesionados en accidentes de automóbil habían estado bebiendo. En Noruega es ilegal manejar (o tratar de) si el contenido de alcohol en la sangre es 50 mg. por ciento o más. En los Estados Unidos la ley no considera evidencia de intoxicación alcohólica a menos que sea 150 mg. por ciento o más. En un individuo pesando 75 kilos, esto equivale a 180 cc. de whiskey de "100 grados" en la circulación.

Es una responsabilidad moral de la profesión médica el fomentar y apoyar leyes dirijidas a disminuir accidentes automobilísticos debidos a la ingestión de alcohol.

helped him wind our family clothes line around these tires, between each wooden spoke, and on he went.

Physicians quickly became aware of the death-dealing qualities of the automobile and for years have sought, still unsuccessfully, to modify these lethal aspects of the motorcar.[1-6] Traffic deaths and injuries, along with cancer and cardio-vascular diseases, rank as our most serious public health problems.

Until the car-makers are willing or can be forced to embody those design features in the automobile which responsible physicians have been advocating for the last thirty years, the numbers of traffic deaths will not diminish, but will increase.

alcohol

Increasing data reveal that something over 60 per cent of fatally injured drivers had been drinking. One prominent pathologist says that this merely indicates that almost everyone drinks and drives. Actually, 60 per cent is very conservative, for in a substantial number of fatal accidents the drinking driver is not killed, and in a further substantial number he does not die until after the alcohol in his blood has disappeared. Further, a substantial number do not die in the first 12 to 24 hours after the crash, and thus do not enter coroners' statistics.

The little nation of Norway is the only country in the world to face the problem of the drinking driver realistically. In 1926, this little nation of rugged individualists made it illegal to drive, or to try to drive, any motor vehicle when the blood alcohol was in excess of 50 mg per 100 ml. To this day it is more rigorously enforced than the lesser laws in the United States or any other country.

drinkers not drunk?

In 1938, an official committee of the American Medical Association promulgated the figure of 150 mg per 100 ml as the figure at which everyone is under the influence of alcohol. Under the benevolent ministrations of the legal profession, this figure has become in the United States the level below which no one is under the influence of alcohol. One hundred and fifty milligrams of alcohol per one hundred cubic centimeters of blood in a 165 pound person represents the equivalent of 6 ounces of 100-proof whisky *circulating* in the blood, and requires that about 7 ounces be ingested in the hour preceding the test. It is thus that we have sought to control the drinking driver in this land of the free and home of the brave. We are certainly brave.

wrist slapping

I know of many cases in which drinking drivers on a second or third offense have killed peopeople and have escaped with nothing more than another revocation and a fine of fifty dollars.

Official steps are being taken to reduce the figure in this country to 100 mg per 100 ml. North Dakota is the only state to do so thus far. New York is the most advanced, and has recently passed a law making it a misdemeanor for a person under the age of 21 years to drive a motor vehicle while his blood alcohol is over 50 mg per 100 ml.

It is the moral responsibility of the medical profession to advocate and actively support legislation which makes it illegal to drive any motor vehicle and this includes boats and airplanes, if the blood alcohol level of the operator is higher than 30 mg per 100 ml. Legal and statistical criteria require a variable three times the laboratory error of 5 mg which allows a level of 45 mg per 100 ml under this legislation.

The havoc caused by the drinking driver is the largest single factor in this traffic problem. In fact, problem of the drinking driver is greater than all the other factors combined, bad roads, bad brakes, bad lighting, and all.

Many official figures do not seem to support this. This is because these figures are not based upon chemical tests for alcohol on every driver involved in an injury-producing accident. When this is done, the actual facts become apparent. New York passed an implied consent law in 1953. The law assumes that it is a privilege to drive and that the state may grant or refuse the privilege. The state, therefore, can include preconsent to examination as an implied condition to issuance of the license. This permits blood alcohol tests to be made on suspects without further consent.

The medical profession's first duty in this field is to advocate and actively support such a law in every state.

With the exception of the clergy, the medical profession is the only one which seeks to put itself out of business. At the turn of the century, typhoid fever was killing almost as many people as the motorcar is now, and was the backbone of the medical practice. Doctors were tireless in the eradication of this scourge. Almost all physicians, particularly the neurosurgeons and orthopedists, are convinced that "there must be a better way", as far as the motorcar is concerned. They must acquaint themselves with the facts in this field, and take their rightful position of leadership. ■

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Anesthetic Problems in Severely Injured Patients

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We cannot administer anesthesia to a patient without a patent upper airway, without adequate respiration, without adequate fluid and electrolyte replacement and, often, without a needle in a vein for drugs and fluids. So, with your indulgence, I shall reiterate many points made by other speakers.

abstract

GREEN, HENRY D. (University of Washington School of Medicine, Seattle, USA) Anesthetic Problems in Severely Injured Patients. Northwest Med 62:597-599 (Aug) 1963.

An open airway, satisfactory ventillation and adequate blood volume must be established befor the anesthesiologist can make proper selection of anesthetic agent and method of its administration. In some cases, therapy must begin at the scene of the accident if the patient is to survive until seen by the anesthesiologist and the surgeon. An endotracheal tube may make tracheostomy an elective procedure. Drainage of fluid or air from the chest should be provided and a respirator used if necessary, The type is of less importance than skill of the user. Total fluid loss is usually underestimated and inadequately replaced. Production of urine indicates adequacy of circulation and perfusion. A urethral catheter is essential for accurate observation. Some vital signs in the patients with nervous system injury may be blocked by anesthesia but others remain and can be used if there is a record of preoperative condition. Choice of anesthetic must be made according to conditions but Halothane should probably not be used when there is damage to liver or pancreas.

Neither the anesthesiologist nor the surgeon, unfortunately, sees the patient first at the time of the accident, but very often the anesthesia and surgery begin with the initial respiratory

abstracto

HENRY D. GREEN, (University of Washington School of Medicine, Seattle, USA) Anesthetic Problems in Severely Injured Patients. Northwest Med. 62:597-599 (Aug.) 1963.

Pasaje de aire abierto, ventilacion satisfactoria y un volume sanguíneo adecuado, deben establecerse antes que el anestesiólogo seleccione el indicado agente anestésico y vía de administracion. En algunos casos, la terapia debe comenzarse en el lugar del accidente, o el paciente no llega a manos del anestesiólogo y cirujano.

El tubo endotraqueal relega la traqueotomía a ser un procedimiento de elección y no mandatorio. El drenaje de fluido o aire de la cavidad torácica debe establecerse y si es necesario, el pulmon mecánico se emplea. El tipo de aparato no es tan importante como la destreza de quien lo usa. La pérdida total de fluido a menudo se estima demasiado bajo y no se replace adecuadamente. Producción de orina indica circulación y perfusion renal adecuadas. Una sonda uretral es esencial para la exacta observación. Algunos de los signos vitales, en un paciente con lesión del sistema nervioso pueden ser bloqueados por la anestesia pero otros permanecen y pueden ser analizados si hay datos pre-operatorios. La selección del anestésico se hará de acuerdo con las condiciones, pero no se deberá usar Halothane si hay lesiones hepáticas o pancreáticas.

resuscitation. The first person to the patient after the auto accident, after a fall, or after drowning, must establish an upper airway and institute adequate respiration as needed. These requirements may be met by such simple things as positioning the patient, or by pulling the tongue forward, but it may also be necessary to use mouth to mouth resuscitation. If respiration has been compromised by the accident, these things must be done then or the patient will never reach professional care in time for your efforts to be effective. As physicians, we are responsible to see that members of rescue squads, firemen, policemen and others have at least basic knowledge in these fields. During the Korean War members of the army hospital staff responsibile for much of the neurosurgical care cut a hole in the regular canvas litters, and by placing the patient prone with his face over this cut-out were able to prevent much of the aspiration secondary to vomiting. It was a simple solution that worked. A life saving idea such as this may come as an inspiration at times but inspiration works best when there is knowledge of basic principles.

tracheotomy

In considering professional care of the traumatized patient from the point of view of the anesthesiologist, it is easiest to think in terms of physiologic systems. Our first concern is for the airway and ventilation problem. Once the patient reaches professional care, the possibility of tracheostomy always comes up for discussion. Very, very rarely at this point should the tracheostomy be an acute emergency procedure. The anesthesiologist can insert an endotracheal tube which will serve the same purpose and allow performance of a more or less elective tracheostomy, done under better surgical conditions, or in conjunction with any other surgery necessary. The endotracheal tube may even be left in place five to seven days, if it is changed regularly as with a tracheostomy tube. While working on the upper airway, we also can examine and evaluate the chest wall and the lower respiratory system. With a tube in place the unconscious patient, or the patient with injury to the upper airway can be examined and treated as necessary for aspiration of blood, vomitus or foreign material. Dr. Spencer discussed treatment of this, so I shall not go farther. At this time we also can examine for pneumothorax, hemothorax, flail chest, and other respiratory system injuries. Drainage for air or fluid in the thoracic cavity can be established. The patient with multiple rib injuries, a flail chest, can be started on respirator therapy and it has been shown by Mörch et al. that this frequently is all the treatment needed. Which respirator used is of less importance than knowledge of its characteristics by the people using it. Anyone who is to use one of the machines should get to know it well before it is placed in service on a severely injured patient. The person who is to operate the machine should stay with it until the patient's condition is controlled. Leaving orders to be followed by someone less well trained may lead to disaster.

blood volume

The second major system to which the anesthesiologist may contribute is that of blood volume. First and foremost, you must stop major bleeders. There is no way to stop massive hemorrhage other than by pressure or application of clamps. But that is only the start. If the patient has lost blood we must replace it with some form of fluid to keep the vascular system functioning. Groups in Galveston, Cleveland, and St. Louis have shown that many different solutions can be used. Whole blood replacement may be essential, but don't forget that massive trauma is comparable to a burn with loss of large quantities of fluid and electrolytes into the injured area as edema. Days later this fluid will be reabsorbed, but the patient needs replacement early for this loss.

How can we estimate this loss? There are many laboratory procedures available, but there are many simple procedures that give information more quickly and often continuously. I feel that any severely traumatized patient should have a urethral catheter placed for bladder drainage. Urine flow is one of the best indicators of adequate circulation and perfusion. Venous pressure, measured through a venous catheter placed as near the right heart as possible, gives an excellent indication of the adequacy of vascular volume. It may give erroneous evidence in the presence of mediastinal injury or cardiac tamponade but otherwise it is very good. Color of the patient, the extent of venous filling, and character of the pulse are important clues. Blood pressure should be taken at frequent intervals or monitored continously. This latter may be influenced by many factors, but it is an important guide to therapy. Once the patient is stabilized he should be weighed at least daily. This will help determine when the edema fluid is beginning to return to the circulating volume. If there is a general statement applicable to this system, it probably is that *total fluid loss is usually underestimated and inadequately replaced.*

brain damage

The anesthesiologist will be concerned, as will the surgeon, with any nervous system injury. The patient with a head injury poses a problem still not solved. In general, we would prefer not to give any anesthesia to this patient, but frequently he has other injuries that require surgical intervention. Anesthesia is going to mask many of the classical signs used to follow the progress of a head injury, but there are others available. Eye signs frequently remain for observation, changes in blood pressure, pulse and respiration can sometimes be used, responsiveness under light levels of anesthesia can be followed. They all require observation and, more important, they require pre-operative observations for comparison. Anesthesia is not an innocuous thing, but with adequate respiration and replacement of blood volume, adequate oxygenation during and after the surgery, the patient with head injury can be safely treated for his other injuries.

choice of agent

The question of which agent and which technique may be best for the traumatized patient now comes up for discussion. I think, with our present knowledge, it is best to leave the answer vague and make generalizations only. Almost any agent and any technique can be satisfactory providing they are used well and carefully. The agent and technique will have to be selected according to the patient's injuries and the need for the surgery planned.

Surgery should be well planned and preferably directed by one individual, probably the most experienced individual present. The fact that the patient is to receive an anesthetic does not open the way for every injury to be surgically corrected. Each additional repair means more time, more blood loss, and more trauma to the patient. Judgment and experience must determine just what will be done.

If the injury is limited to one or two extremities and the vital signs are stabilized, regional anesthesia is often most satisfactory. With massive and multiple trauma, a general anesthetic is usually preferred. This gives us better control over airway and oxygenation. Based on the current feeling regarding Halothane and toxic hepatitis, it probably should not be chosen for the patient with injury to the liver, biliary system, or pancreas. All this must be based on the patient's condition and what you, as the surgeon, intend to do.

conclusion

To conclude, there are three things the anesthesiologist will concern himself with in the severely injured individual. One is to insure an adequate airway. With the airway assured, we then want to assure adequate ventilation, adequate oxygenation and removal of CO_2. And then we must have adequate blood volume. We need adequate blood and fluid replacement.

I have intentionally mentioned only simple monitoring techniques. They are always available. Properly used, and properly interpreted, they are reliable.

With adequate ventilation and a functioning cardio-vascular system established we can determine what anesthetic to use on your patient for your planned surgery, and the manner in which it is to be given.■

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Traumatic Cardiac and Peripheral Vascular Injuries

FRANK C. SPENCER, M.D., Lexington, Kentucky

There are two rather rare types of cardiac injury which are not of great practical importance. The first is myocardial contusion which produces damage similar to that in myocardial infarction. Although this type of injury is well described in the textbooks, I have yet to see one in spite of having been around university hospitals with busy trauma services, for a long time. I am beginning to decide that it must be a fairly rare lesion. Another quite dramatic lesion which would not appear to be of much practical significance in the immediate management of trauma is the acute production of an intracardiac shunt such as an aortic-right ventricular fistula. Although these are rare, they do occur in closed chest trauma and produce a dramatic picture with widening of the pulse pressure and a loud murmur over the chest. Such lesions are amenable to repair with cardio-pulmonary bypass.

A subject of more practical importance, however, is that of traumatic injury to the aorta. Until only recently, this diagnosis has usually been made by the pathologist. Our first experience with this lesion occurred several years ago. The patient was seen in our emergency department after an automobile accident, complaining of a sore chest. The physical examination was quite negative. He had no fractured ribs. A chest x-ray was negative except for slight widening

abstract

SPENCER, FRANK C. (University of Kentucky School of Medicine, Lexington, Ky., USA) Traumatic Cardiac and Peripheral Vascular Injuries. Northwest Med. 62:600-604 (Aug.) 1963.

Myocardial contusion and traumatic production of intracardiac shunt do occur but not frequently. Due to fixation of the aortic arch, its rate of deceleration, in an accident, may differ from that of the lower aorta. Result is a tear through intima and media, sometimes extensive enough to constitute transection of the aorta. Soreness in the chest and some widening of the mediastinal shadow, on x-ray, are the only constant findings. Remaining adventitia may hold for a variable period or permit slow development of an aneurism. Fifteen to twenty-five per cent will live hours or days and may be saved by surgery. Repair of peripheral arterial injuries is highly successful and need not be ruled out in badly contaminated wounds or those seen very late. A numb, motionless foot means gangrene unless circulation is restored but if there is sensation and movement, gangrene is not likely. Tourniquets of the Spanish windlass variety can do much damage. Backflow does not always indicate adequate peripheral anastamosis and should not be used as an indication for ligation. Secondary closure of soft tissues is successful if the arterial repair is covered and the wound well debrided.

abstracto

FRANK C. SPENCER (University of Kentucky School of Medicine, Lexington, Kentucky, USA) Traumatic Cardiac and Peripheral Vascular Injuries. Northwest Med. 62:600-604 (Aug.) 1963.

La contusión del miocardio y la producción traumática de un shunt intracardíaco son ocurriencias posibles pero no probables. Debido a la fijación del arco aortico y su modo de deceleración, la fisiopatología del trauma varía de la, de la aorta abdominal. El resultado es la ruptura de la íntima y media, a veces de tal magnitud, para constituir transección de la aorta. Dolor de pecho y agrandamiento de la sombra mediastinal son los únicos, sintoma y signo respectivamente, constantes. La adventicia puede mantener la integridad del vaso por períodos variables o permitir la gradual formación de un aneurisma. Un quince a veinticinco porciento de los pacientes sobreviven horas o dias y pueden ser salvados con cirujía. La reparación de heridas de arterias periféricas es altamente eficaz y no se ha desechar en heridas contaminadas o aquellas que se atienden tarde.

Un pie inmóbil y entumecido significa gangrena a menos que la circulación se restore, mas si hay sensibilidad y movimiento, gangrena no es probable.

Torniquetes del tipo de malacate pueden causar mucho daño. Le circulación de retorno no es signo seguro de anastomoses periféricas adecuades y no se debe tomar como indice para ligadura. El cierre secundario de los tejidos, tiene éxito, si la reconstrucción arterial se cubre y la herida se debrida adecuadamente

Table 1

CLINICAL FINDINGS IN SEVEN PATIENTS WITH RUPTURE OF AORTA

Age range:	23 - 61 years
Symptoms:	chest pain, weakness
Rib fractures:	6 patients
Hypotension:	4 patients
Chest X-ray:	mediastinal widening: 7 patients
	hemothorax: 3 patients
Diagnosis:	early (1 patient); late (3 patients)
	post-mortem (3 patients)

of the mediastinum which was interpreted as a minimal mediastinal hematoma. The patient was allowed to return to his home. Twenty-four hours later we received a call from the medical examiner. The patient had been found dead in his bed without any warning symptoms.

At autopsy, he had a chest full of blood and complete transection of the aorta. During the next two years we encountered seven of these injuries and made a number of clinical observations, none of which were very specific (Table 1). The age range didn't mean anything. Each had a sore chest, practically all had been in automobile accidents. Most had fracture of one or more ribs and some had change in blood pressure. None of this was of any diagnostic significance or significantly different from the myriad of people one sees who have suffered a blow to the chest and have some sore ribs at the time.

The only common feature in these patients is widening of the mediastinum on x-ray. It was interesting that only half of them had blood in the pleural cavity. We made the diagnosis at an early stage in one patient and just before death in three. In three others, the diagnosis was not made until after death. This study reveals one important fact, however. There is plenty of time to diagnose and operate on this condition in certain patients (Table 2). The group at Walter Reed, under General Mattingly and others, studied a large group of such patients collected from the literature and found that about 15 to 25 per cent will live from several hours to several days, certainly long enough for the diagnosis to be made and operative therapy undertaken.

Table 2

COURSE FOLLOWING INJURY OF SEVEN PATIENTS WITH RUPTURE OF AORTA

Death within 24 hours:	4 patients
Length of survival:	4-12-14-24 hours
Operative death, 4 days:	1 patient
Sudden death, 21 days:	1 patient
Aortic injury repaired, 35 days:	1 patient

It has been discovered that this injury is the result of differential deceleration in which the arch of the aorta, with its vessels, decelerates at a rate different from that of the lower thoracic aorta which does not have the arch vessels to fix it. The result is a traverse tear within the aorta which begins on the internal surface. The extent of the injury may vary from a partial transverse tear to total transection, with retraction of the two ends. The remarkable fact is that even though the intima and media are completely divided, the adventitia is strong enough to prevent exsanguination in a certain percentage of patients.

The degree of mediastinal widening varies remarkably. In some instances one may see very massive widening of the mediastinum; other patients show only a minimal degree. One cannot conclude from this, however, that everyone with a wide mediastinum should be promptly operated upon. Other types of injuries, such as hematoma, can cause a similar widening. Solution to the diagnostic problem is provided by an emergency aortogram. Col. Jonkey, at Walter Reed, has told me that in the past six months they have had three such patients, all of whom

Table 3

CLINICAL FINDINGS IN EIGHT PATIENTS WITH TRAUMATIC ANEURYSM

Aortic injury not suspected in any following trauma			
Mode of injury:	auto accident:	7	patients
Time since injury:	1 yr. or less:	2	patients
	2-5 yrs:	3	
	10-37 yrs:	3	
Symptoms:	asymptomatic:	4	
	slight chest pain:	3	
	severe dyspnea:	1	
Diagnosis:	mass visible on x-ray		
Treatment:	excision, graft:	6	
	tangential excision:	1	
	operative death:	1	

they diagnosed by aortogram and all of whom they operated upon. The lesion was repaired in each case.

The only patient that we have seen early and operated upon was a boy whom we saw initially just two weeks after injury. He was not interested in being operated on at the time and we lost track of him for about a month. We did operate on him at about six weeks. He had the most advanced lesion we had seen. We found a fibrous channel carrying blood and on opening this channel, under cardiopulmonary bypass, we found one end of the aorta retracted upward and widely separated from the similarly retracted distal segment with a fibrous sheath between the two ends. We inserted a Teflon graft.

Eighty to ninety per cent of these tears occur in one location. One rarely sees a tear in the ascending aorta and rarely in the distal portions. The great majority are at the point where the ligamentum arteriosum attaches the aorta to the pulmonary artery.

One further aspect of this problem must be considered. In reviewing the literature, we find that many of these patients die as late as six or eight weeks following injury. During that time they are usually asymptomatic. Then, during some minor episode such as elevation of intrathoracic pressure while coughing or straining at stool or lifting, they suddenly collapse and succumb with a chest full of blood. The latest death that we could find on extensive review of the literature occurred at about six or seven weeks. It would appear that after this period the fibrous tissue is strong enough to prevent rupture and the patient remains with a traumatic aneurysm. Unlike a syphilitic or arteriosclerotic aneurism, it develops very slowly. We have accumulated data on eight such patients (Table 3). Seven were in automobile accidents. The only history of trauma that could be obtained from the eighth patient, was that he had been kicked by a calf 20 or 30 years before, breaking several ribs. Data have been published indicating that 15 or 20 years may elapse between the time of injury and the development of an aneurysm. Most of these patients had very few symptoms and the lesion is usually brought to attention by a mass seen on x-ray. Dyspnea may be observed, however, as the result of pressure on the left main bronchus.

We routinely recommend operation for these people unless they have systemic disease. It does not appear, however, that one need have a sense of urgency in dealing with such aneurysms, since we could not find any which ruptured. I am sure it must occur, however, because they tend to grow.

peripheral arterial injuries

The data I will present are not new but are derived from data that we collected about ten years ago during the Korean War. This subject should be as well settled as the role of appendectomy in appendicitis. Unfortunately this knowledge still is not widely applied, and I think should be emphasized quite strongly. The principles of acute repair of arterial injury are so solidly backed by data from a number of sources that one should demand a high degree of success with repair of acute arterial injuries. If one does not achieve a success rate well over 90 per cent, the fault is in the technique, not the injury. This is emphasized by injuries seen in the Korean War where, despite several hours time lag, massive soft tissue destruction from mortar and grenade fragments and severe wound contamination, repairs were accomplished with a high percentage of success. Not all of these extremities survived, because of the long interval between injury and surgery, but the cause of amputation was almost never failure of ability to repair the artery.

The fundamental points with respect to such injuries are that with any acute arterial occlusion, the basic observations are of absent pulse and a pale extremity. Confusion may exist, however, in the presence of shock where the peripheral pulse is hard to feel. The critical observation, however, is that if the patient has sensation in his extremity and can move it, he is not going to lose it from ischemia in the immediate future. He may have had arterial injury, but he is not going to develop gangrene. Conversely, if the man has a numb, motionless foot, it is probably going to become gangrenous unless something is done to improve the circulation.

The types of arterial injuries that may be seen are four in number. The artery may be completely divided and retracted. There may be a lateral tear in the wall, there may be a fistula or occasionally one may see arterial spasm. I think there has been a lot of loose talk about arterial spasm that should have been discarded long ago. The lesion is almost always thrombosis from intimal rupture, much like the lesions we saw in the aorta. I have seen two or three cases that were genuine spasm similar to that producable in the laboratory. The majority, however, are associated with rupture of the intima which is curled up inside the lumen with thrombosis superiimposed. They should be treated by resection.

In the emergency situation, tourniquets are virtually never required. The only satisfactory tourniquet is the pneumatic type with adequate padding. Certainly, the old Spanish windlass of your shirt, a rope, or the like wrapped around an extremity and twisted with a stick, should be completely discarded. You may save the extremity in terms of arterial function but the sciatic nerve that you press against the femur, or the median nerve that you squeeze against the humerus, will be seriously damaged as this sharp tourniquet bites into it. The correct method of control of hemorrhage is to pack the wound, whether it takes three feet of gauze or thirty feet. The only thing is to use enough gauze and to tie these pieces together before you put them in. No matter how large the hole is, you can control it by packing with gauze and applying pressure over the surface. This is obvious with a wound in the neck, the axilla or the buttocks, where you have no choice but to pack it, and one can certainly use the same method in an extremity to obviate the necessity for a tourniquet. Time is of the utmost importance in such circumstances. I would not recommend sympathetic blocks or anticoagulants under any circumstances unless the patient is moribund or operation is out of the question. In such instances you might consider one of these only because you could not treat the definitive lesion.

The time lag doesn't mean a lot in deciding whether you can fix the injury or not. Certainly, the longer the interval before repair the less likelihood that it will be successful but one cannot establish a finite time after which the artery cannot be repaired. If the extremity is not obviously gangrenous, we should forget the clock and go ahead and repair the artery.

Back bleeding is not a reliable sign as to whether or not an artery may be ligated, since it depends on several anatomic variations. If a small collateral enters the main vessel just out of sight downstream, it will bleed back until you tie it off. Yet, there is not enough blood going through that collateral to force blood through the distal tree. If the collateral is at greater distance, good back bleeding will not occur. We collected 20 patients whose legs were amputated after such ligation. In nine of them the surgeon recorded that he had good back bleeding and therefore ligated the artery.

When you cut an artery, it snaps back like a rubber band. Should you operate upon someone who has had a severance of his artery, the ends will be an inch or so apart. If you are deluded into thinking that some of this vessel has been torn away and lost, you will needlessly utilize a graft with less satisfactory results. The inherent arterial elasticity requires application of a moderate amount of traction to reapproximate the ends and obtain the preferred primary suture.

If a graft is required, a venous graft is probably the best, but is harder to work with. If one prefers not to use a venous autograft, one of the plastic materials can be inserted. The long-term results with such plastics are not good but seldom will a patient with an arterial injury lose his leg from subsequent thrombosis of the graft since time will be allowed for the development of collaterals, so that you have gained the necessary time and saved the extremity and the graft can be revised at a later date.

The problem of infection was one of the most interesting aspects of arterial injuries in the Korean War. It was difficult to believe that with a badly contaminated wound, several hours old, dragged through the Korean equivalent of cow manure, one might put in an arterial homograft and not expect disaster to supervene. Well, *like so many things in medicine you have to decide from the facts whether your theory is or is not valid.*

If you debride it well, irrigate it well, give antibiotics, cover the arterial repair, and leave the remainder open for secondary suture five days to a week later, infection is not a problem. A wound develops an astonishing, yet unexplained, ability to resist infection after two or three days of exposure. This point is applicable not only to arterial injuries but any type of traumatic wound that is seen several hours after injury. If any uncertainty exists, merely wash and debride it and about three days later sew it up. At that time, the wound looks like it has been in the ice-box. It hasn't changed much. It is the lag phase of wound healing. The fats stay yellow, the muscle is red, it is not granulation tissue and if you sew it at that time, it will heal just about as well as if you had done it the first day you saw it.

In summary, when you see someone with an arterial injury, ignore the time limit, do not be deterred because of the possibility of infection but rely upon secondary closure. Do not be unduly influenced by back bleeding and expect a good result in almost all the cases. If you don't get a good result, it is due to the surgical technique. ■

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Management of Hand Injuries

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Since forty per cent of industrial accidents involve hands, any physician working in an agricultural or industrial area is aware of the importance of this subject. Proper care of hand injuries is an immediate problem for many physicians because care must be provided at the site of the accident. One does not have time for evacuation if the injuries are to be treated in the first eight hours. The problem of infection in such injuries is definitely so serious that one cannot wait fifteen to twenty-four hours before instituting management. Therefore, it behooves all of us who care for injured people to know some of the basic points about hand evaluation and accurate diagnosis, and to have some concept of treatment plans.

The treatment plan should include some understanding of the operative techniques available and in many instances should include actual performance of operations. One cannot do any type of hand surgery without realizing that, unlike many other areas of the body, the postoperative program in the injured hand does not stop with healing of the wound. One must carry on with his patient a number of months afterwards if the result is going to be a properly functioning part.

Obviously, the importance of a hand injury from a functional standpoint cannot be gauged solely upon the size of the part involved, or on the size of the surface defect. Frequently, a simple fracture of the metatarsal head and the resultant interference with the intrinsic motor mechanisms can cause more final functional disability, as far as a patient's livelihood is concerned, than would much more dramatic fractures of larger bones such as the femur. In the severely burned patient, many areas of the body may be involved, but all too commonly, after the burn is grafted and healed and the major joints mobilized, the final disability resides primarily in hand deformities.

There are three common mechanisms of injury to the hand: lacerations, crushing wounds, and burns. The lacerated wound has a much better prognosis than the crush wound. A crushing injury involves multiple tissues simultaneously and usually involves each of the tissues or struc-

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abstract

MACCORMACK, ROBERT M. (University of Rochester School of Medicine, New York, USA) Management of Hand Injuries. Northwest Med. 62:605-608 (Aug) 1963.

Regardless of other injuries, the final disability of the injured workmen is apt to reside primarily in hand deformities. Deformity seen at first examination offers a clue to tendon or nerve injury because loss of control permits opposing motor units to pull hand elements out of the normal position of balance. Injury to skin, bone, nerve and tendon must also be appraised. If three or more of these tissues are injured hopelessly, amputation of the part must be considered. Delayed tendon repair may offer better final result than primary repair and can be far superior to inadequate surgery at the time of injury. Edema of the injured hand acts like glue in creating post-injury stiffness. It should be prevented by dressing the entire hand in position of relaxation. A splint should be used.

abstracto

MACCORMACK, ROBERT M. (University of Rochester School of Medicine and Dentistry, Rochester, New York, USA) Management of Hand Injuries. Northwest Med. 62:605-608 (Aug.) 1963.

Independientemente de otras lesiones, la incapacidad del trabajador industrial reside primordialmente en deformidades de las manos. Cuando éstas se ven por primera vez, el exámen médico proporciona datos relativos al grado de lesiones de nervios o tendones, puesto que la perdida de de control, permite a músculos oponentes, mover a elementos de la mano fuera de su posición normal. Heridas de la piel, huesos, nervios y tendones deben ser examinadas cuidadosamente y si tres o mas de estos tejidos son lesionados sin posibilidades de recuperacion, amputación está indicada. La sutura de tendones si se pospone electivamente a veces da mejor resultado que cirujía inadecuada al momento del accidente. Edema de la mano lesionada actúa como goma y da lugar a contracturas. Se debe prevenir bendando la mano en posición de relajación muscular. Férulas tambien se deben emplear.

tures more severely than does a clean, sharp wound. Burns are almost a special subject in themselves, but certain features in the care of hand burns should be discussed.

early evaluation

In general, when one looks at an injured hand, a glance can give a great deal of information. Any hand injury is physically painful, but in addition, trauma to the hand carries with it a great deal of emotional significance so that the patients tend to be unduly apprehensive and frightened. It is important, therefore, to do a very gentle and considerate, although thorough, examination of the injured part.

An initial, tentative diagnosis of the structures injured can be gained simply from looking at the site and character of the surface injury, if one remembers the basic rule in hand trauma of presuming that the structure or structures lying in the vicinity of the laceration are considered damaged or divided until proven otherwise. Significant injuries to hand structures will always be missed if one does not purposely try to rule out probable damage.

Another aid to diagnosis at a glance is the awareness that all the structures subserving motor activity in the hand normally maintain the hand at rest in a position of delicately balanced tone. Simply looking at one's relaxed hand, or observing the hand of an anesthetized or sleeping patient serves readily to refresh one's memory as to this position of balance. It can be described very simply as the hand being held in graded flexion with the exception of the wrist which is in moderate extension and all the digits from the thumb to the little finger are in progressively increasing flexion.

If one of the tendon structures, or the innervation of its power source, is interrupted, the motor units normally acting to oppose the damaged unit will distort the balance. The deficiency is obvious at a glance. For example, division of the flexor tendons to the index finger, or of the median nerve, will produce in the relaxed hand extension of the index finger. This loss of normal balance is made more apparent when the patient attempts to flex or extend his fingers. If the patient is unable or unwilling to cooperate, the deformity can be accentuated by passively extending or flexing the wrist. Normally, flexion of the wrist tends to extend the fingers and extension of the wrist tends to increase flexion of the digits.

anatomy

Those who do not see very many hand injuries may not be well versed in the complex anatomy of the hand. This lack may interfere with application of the maxim about underlying injury being suspected until proven otherwise. Actually, while the hand is anatomically a rather complex structure, a few simple and basic features can suffice, in most instances, to permit a very adequate evaluation of any hand injury.

One simply recalls that the radial nerve serves the dorsum of the forearm and hand (innervating the extensors of the wrist and fingers and supplying sensation to the back of the hand and digits), the median nerve provides the sensation and long flexor activity to the radial half of the hand (the sensation to the palmar side of the thumb, index and long finger and motor power to the long flexors of the same fingers plus motor power to the opponens of the thumb) and the ulnar nerve, in turn, supplies the ulnar half of the hand so far as sensation is concerned and also with respect to long flexor power. The ulnar nerve also innervates the adductor of the thumb. To many people this is a confusing feature because the thumb is not on the ulnar side of the hand; actually, one simply has to recall that the adductor arises from the ulnar side of the hand in order to clarify this otherwise confusing point in anatomy.

In addition to determination of the anatomic structures involved or divided by the hand injury, the examination should include an evaluation of injury to the major tissues, skin, bone, nerve, and tendon. With bone the joint spaces must also be considered. While the only absolute indication for amputation of the hand, or any of its parts, is irrefutable and irreversible absence of blood supply to the injured part, there are occasions when a hand part is better amputated at the primary operation rather than retaining a viable but useless or painful digit. If three or more of the tissues mentioned above are irreversibly damaged, one should consider amputation. A finger without sensation but with good motion can in many circumstances be functional, and conversely, a finger which is stiff and moves only at one joint but which has good sensation and skin coverage can also function adequately. However, a finger in which joint activity is destroyed, skin coverage is absent or deficient, and in which sensation is impaired is obviously as much of a hindrance to the patient as it may be a source of amazement to others if it survives.

procedure

When one is comfortable with his evaluation of the structures involved in the hand injury, the next question, of course, is what should be done about it. It is probably a good, safe, general rule to avoid doing more than need be done at the first operation, to obtain a healed and clean wound. There are exceptions to this. They are decided by consideration of the circumstances of the patient, the availability of adequate operating facilities, and the ability of the surgeon adequately to care not only for the technical aspects of the initial operation, but for the patient in the prolonged postoperative period. Primary repair of nerves or tendons, for example, requires a more prolonged period of immobilization than simple suture of the wound and delayed repair. Even if the tendon or nerve suture is technically superb, one must be prepared to manage the hand properly for weeks after the injury or else the result will be a hand which is less functional than if the structures had not been repaired. Similarly, before one undertakes a cross finger flap or some such reconstructive procedure, he must be prepared to care for the donor finger as well as the injured finger lest he end up with two damaged digits rather than one.

It should also be pointed out that an unsuccessful, primary tendon repair, particularly if the repair is attempted in that area called no-man's land (lying between the distal palmar crease and the distal inter-phalangeal crease) will result in scarring about the tendon, and within the sheath. It usually also results in relatively stiff joints. A secondary reconstructive procedure is, therefore, greatly handicapped and the results from tendon grafts done after an attempted primary repair are in no way comparable to the excellent results than can be obtained by a purposely planned secondary procedure.

The concept that primary nerve and tendon repair should *never* be done has developed because of the problems involved in attempting such repairs under adverse circumstances (inadequate help, middle-of-the-night hours, possible lack of a qualified surgeon). This does not mean that there are not occasions when primary repair is the best way to treat a given injury, but such an undertaking should be embarked upon only with a full understanding of the problems involved. Whenever any question arises as to the wisdom of performing extensive reconstructive operations as a primary step, one should never hesitate to keep his operation simple and to aim only for a clean healed wound. This means suture of lacerations over structures known to be divided, and use of split-thickness skin grafts to cover denuded areas. The hand can then be kept limber and the joints mobile while sterile healing is accomplished. Secondary reconstruction may then be accomplished with greater efficacy.

Repair of hand injuries, whether done as a primary or secondary procedure, almost always requires use of a well-applied and properly functioning tourniquet. The anesthesia that is used depends upon a number of factors. Routes of administration available include local infiltration, regional block, axillary or brachial block, and inhalation. The anesthetic technique selected will depend, not only upon the nature of the injury, but often upon the circumstances surrounding a specific patient in a specific hospital environment.

nerve injuries

Repair of nerve injuries, either as a primary or a secondary procedure, requires that the surgeon be able to carry on a specific sequence of steps in evaluation and technical management. First, the nerve injury must be suspected, and demonstrated by proper examination. Accurate determination of the injury and its subsequent exposure at operation requires a certain knowledge of anatomy of the part involved. Careful and delicate operative technique should reunite the nerve with fine suture material and with minimal trauma. Mixed nerves must be approximated in strict anatomic position so that regenerating fibers will have an opportunity to find their proper distal course. Careful and proper dressing technique and immobilization, and prolonged, knowledgeable postoperative management are as essential as or more essential than a nice neat sewing job. Inasmuch as a nerve which is regenerating well will grow only at the rate of approximately one millimeter a day, or a little more than an inch a month, it is obvious that nerve injury in the arm or forearm will be accompanied by many months of peripheral denervation. It is crucial that in this long period of time the fingers and wrist be carefully managed to prevent not only stiffness and contractures but even such a simple thing as a burn because the patient is not aware of temperature differences. With simple tendon lacerations, a similar sequence of knowledgeable activity is necessary in order to provide the patient with his optimum result. In addition, the surgeon should be capable of using the different types of tendon suture in the proper situation. These include Bunnell criss-cross sutures with or without pull-out technique, Pulvertaft weaving anastomosis, and tendon-to-bone techniques.

postoperative care

Many hand injuries that are handled adequately in the operating room itself, suffer in their long-term results from inadequate attention to dressing technique. As a working rule, no matter what the injury is, whether it is on the extensor or valor surface, whether it is a fracture or a tendon or nerve injury, the hand should be dressed in the position of rest or balance described previously in the discussion on examination of the hand. A similar position, which in some respects is better for dressing immobilization because the thumb is more abducted than in the rest position is that posture assumed by the hand if a fifty cent coin were held at its edge by all five digits. That is a generalized flexion of the hand in a cup-like position. If relaxation on tendon or nerve sutures is required, one can extend or flex the wrist a little in order to obtain it. Rarely is it necessary to flex the wrist much below the straight, or 180 degree, position.

If the dressing does flex the wrist severely, it will invariably lead to stiffness in the wrist and the patient will require a long period of time before he can bring the wrist up into the position of extension which is so essential to forceful flexion of the digits. In addition, passive wrist flexion tends to cause metacarpophalangeal extension, probably the most incapacitating position the hand can be in, if it persists. Basically, the hand is always dressed in the same position, no matter what the injury has been, and no matter what operation. Tension on the larger muscules and the main nerve trunks is controlled by only slight changes in the position of the wrist.

position of nonfunction

The so-called position of nonfunction which results from the lack of attention to these details, consists of hyperextension of the metacarpophalangeal joints, hyperflexion of the proximal interphalangeal joints, and adduction of the thumb. This is the same deformity of posture which is found in an established ulnar paralysis. Also, unfortunately, this is the position the burned hand tends to go into because practically all burns of the hand occur on the dorsum. With secondary healing and contracture, the typical deformity is produced.

After any injury, the hand quickly becomes edematous and, in the hand, edema acts just like liquid glue. It leads to stiffness, even of non-injured parts, and these may be as troublesome in final analysis as the injured parts. Therefore, for the first week or ten days after any injury of any extent other than the simplest of lacerations, we usually dress the entire hand for comfort, for maintenance of functional position, and for limitation of edema. After this period, one can go to a much smaller dressing and mobilize non-edematous, non-stiffened parts.

Circular dressings should not be placed around digits for any kind of hand wound. Rather, padding should be placed between the fingers to prevent maceration and the entire part should then be placed in a loose fluff dressing. We like to leave just the tip of the fingers out so that we can check circulation and sensation, and also check the position of the hand within the dressing. Having the fingertips out also helps the victim's morale after a serious injury. It is reassuring to a patient who has had any significant hand injury to find his fingers intact and present the day following his operation.

splinting

The dressing must always incorporate a plaster splint because one cannot maintain proper extension of the wrist without plaster. We splint all but the most minor soft tissue injuries as well as bone injuries of the hand during the first two weeks of dressing. If one doesn't use splints, the patient will invariably come in for follow-up with the wrist flexed and metacarpophalangeal joints and proximal interphalangeal joints will assume the position of non-function. The mechanics of mobilizing the hand and its joints following this preliminary two-week period of dressing, rest, and feeling are quite variable. For certain injuries, progressive activity to full range of motion can be initiated when the pressure dressing is discontinued. For others, selective mobilization must be carefully used if a nerve or tendon anastomosis is to be protected for the three to six weeks sometimes required. ■

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Death and Injury by Design

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We are to discuss the traffic accident, a daily item in every newspaper. We live in the midst of them; most of us have had at least one. Many of us, I think, fail to grasp its real significance. It is a phenomenon of civilization, one of the most important in human history. Let us attempt to place it in realistic perspective.

The Readers Digest for September 1956 pointed out that from 1775 to 1955, the dead in all this nation's wars numbered 1,130,393. In the period from 1900 through 1955, our traffic dead numbered 1,149,414, or at that time, almost 20,000 more than all the dead in all our wars. *The Digest* went on to say that, in 1955 alone, more persons were injured on U.S. highways than were wounded on all the battlefields of the nation's history. This ought to give us some perspective, but let's go further.

The American forces suffered 142,091 casualties in the three-year Korean war, with 33,629 dead. A large proportion of these were not due to enemy action, but were transportation accidents. The three-year deaths were less than any one year on the highways at home, and the three-year injuries were less than a tenth of any one year's traffic injuries at home.

The world picture is just as disturbing. According to figures supplied by 47 member states of the World Health Organization, 102,532 people (78 per cent of them males) were killed in road accidents in 1957.[1]

Is there a solution to this colossal problem? Yes, I think there is, but first, we must analyze the single, individual traffic death or injury.

Here, we run into a tangled web of a thousand possible causes of the traffic accident. Hundreds of experts are tangled in this web, getting nowhere, and not likely ever to get anywhere but deeper.

deceleration

But what is the cause of the death or the injury itself? One of the earlier efforts to solve this problem was the study by De Haven published in 1942 of survivors in nine cases of falls from high buildings.[2] His conclusion was:

"The human body can tolerate and expend a force of two hundred times the force of gravity for brief intervals during which the force acts in transverse relation to the long axis of the body.

It is reasonable to assume that structural provisions to reduce impact and distribute pressures can enhance survival and modify injury within wide limits in aircraft and automobile accidents." (Table 1).

Table 1

Force per unit area on restrained body mass: 150 lb at 8 g

	Area of Application square inches	Load in psi
2" lap belt	40	30
3" lap belt	60	20
2" lap belt and single 2" shoulder strap	80	15
3" lap belt and double 2" shoulder straps	140	8.57
Rear facing seat	208 (Ruff)	5.77
	252-262 (Stapp)	4.76-4.58

Note that adding a single, Sam Browne type of shoulder strap to the 2 inch lap belt doubles the area of application and reduces the psi by one-half. It would, therefore, double the maximum tolerable force of impact. The data may be expressed in different fashion. Force of 2.7 g, in the above case, will create 10 psi on a 2 inch belt but it would require 13.8 g to produce the same pressure if the individual were seated facing backward, (16.6 - 17.6 g using Stapp's figures for contact area). A 3 inch belt, in forward facing arrangement, would require 4 g and a 2 inch belt with 2 inch shoulder strap, 5.3 g. (After Fryer, D.I., Air Ministry Flying Personnel Research Committee Report, FPRC 1055, 1958)

Note that this was published in 1942. The design and construction of automobiles in 1963 would give very little evidence that this study was ever made or these conclusions reached. The military transport services of both Great Britain and the United States have used rear-facing seats for years. (Table 2).

Table 2. Deaths and Serious Injuries

	Crew Members %	Passengers %
In planes with forward-facing seats for passengers	47.1	44.9
Rearward-facing	41.4	10.4

These figures emanate from an eight year experience (the number of crashes is classified information) in the Royal Air Force Transport Command. The aircraft, of the four-engine type, were listed as "aircraft destroyed". The mortality among the crew members (all forward-facing) indicates that the severity of the crashes was comparable in the two groups.

Some may remember, from high school days, the formula for the velocity of falling bodies, (in vacuum),

$$V=\sqrt{2AD}$$

where V is velocity, A the acceleration of gravity and D the distance in feet.

A practical derivation from this formula is the following:

$$g = \frac{(\text{miles per hour})^2}{30 \times \text{stopping distance in feet}}$$

where g is the force of gravity.

When a car occupant crashes into the structures in front of him, his stopping distance can be estimated generously as about two inches. At the eminently legal speed of 30 mph, the formula yields the following answer:

$$g = \frac{30 \times 30}{30 \times 1/6} = 180$$

This force is well under the figure of 200 g postulated by Mr. De Haven, but the joker is that the force is concentrated on the head, face and chest, and also is imposed by hard, irregular, unyielding surfaces and structures. A wooden roof, a collapsible metal ventilator box, or a well-spaded garden plot would be a godsend to the motorist in this situation.

Consider his plight at 60 mph:

$$g = \frac{60 \times 60}{30 \times 1/6} = 720$$

Many thousand such cases have been recorded in the newspapers.

The occupant of the motorcar, having acquired kinetic energy from the sun's rays of a million years ago, finds himself unable to lose this energy in a slow and controlled fashion, but must suddenly divest himself of it in an explosive manner. The explosion kills him.

This is the basic problem for which we must find a solution.

Speaking in epidemiological terms, William Haddon, Jr., has pointed out that man is the host; the agent is kinetic energy; and the automobile is the vector, as, in certain circumstances, is man himself.

The answer, of course, is that the automobile is well designed for unimpeded forward motion, is developing more efficient brakes as a corollary to its increasing speed and power, but is in a most rudimentary stage of development as far as sudden deceleration is concerned. It has taken us ten years to get two seat belts in our cars, and this is but the tiniest beginning. The automobile can and must be designed and built to be a safe place in which to have an accident. We have the know-how today to make the automobile an efficient mechanism in which the human being can decelerate rapidly without injury.

How do we get this car on the road?

three ways to get safe cars: industry responsibility

There are at least three ways in which this can come to pass.

First, the motorcar industry, suddenly imbued with a sense of social responsibility, can agree among its units that they will remove this matter of crash safety from the savage competition which characterizes the routine operations, and will decide upon the safest kind of instrument panel, the most protective bumper, the most efficient arrangement of controls, and will offer these as standard equipment and a standard design on all American automobiles. As knowledge and the art progress, changes for the better will be made from time to time, but the industry as a whole will see to it that details of design and construction that are related to crash survival will be the best that engineering science can produce and will cease to be playthings in the field of glamour and sales psychology.

There is not the slightest shred of evidence that anything like this can come to pass.

The motorcar industry has had nearly thirty years in which to provide us with a safe instrument panel. The late Claire Straith, of Detroit, wrote me in 1954 that he had been trying since 1934 to get the car-makers to provide a flattened, well padded, non-lethal instrument panel and to eliminate many of the other injury producing items of the car interior. He wrote, "It has been a very uphill business. Although the designers themselves know of these hazards, the sales department is the one that throws up hands if any mention is made of a possibility of their beautiful car being involved in an accident, and therefore they have been very hesitant to remove some of the shiny gadgets from the panel and to crashpad the same."

design for damage

As late as the summer of 1961, William Haddon, Jr. addressed the Society of Automotive Engineers as follows:

"A friend of mine, a prominent physician who has long served on one of the committees concerned with this area, saw not many months ago a case of a young child who lost one eye because the vehicle in which he was riding decelerated unexpectedly, with the result that the child was thrown forward, as one knows happens with children riding in cars when cars, as is common, decelerate. The reason why this child lost an eye was that there was placed in the target area—an anticipated target area well known to all of us—a knob. Now the eye, through evolution, or nature, or creation, as each of you will have it, has been very nicely recessed, so that in hitting flat surfaces no damage, unless the impact is overwhelming, results. It has little chance, however, in landing on a protrusion. There *was* a protrusion, placed, by design, literally, at the impact point at which children often hit. That physician, understandably, has been telling many other physicians and anybody who will listen, that the child lost an eye because someone, by design, placed a knob where it would be hit sooner or later by, if not that child's eye, by some other child's eye, or nose, or mouth, or what have you. "I will leave it to you," said Dr. Haddon to the carmakers in the summer of 1961, "to argue the merits pro and con in this particular issue."[3]

I am sure that almost everyone knows of similar instances. I know of five doctors' children who lost permanent front teeth by striking the instrument panels in five different panic brake stops.

That Dr. Haddon would need to recount this incident to a motorcar manufacturing audience thirty years after Dr. Straith's notable efforts, or thirteen years after the classic paper by Fletcher Woodward in 1948[4] indicates to me that we cannot expect the fabulously wealthy motorcar industry independently to accomplish what needs to be done.

the insurance approach

The second way is for the insurance companies to take over, as they have in the electric appliance and gas appliance industries.

In February, 1957, a most perceptive article How Safe Are The New Cars, by Paul W. Kearney, appeared in *Harper's Magazine*. He wrote:

"The whole problem could be solved by the industry itself, with proper policing, and the example is not far to seek. No industry has done a finer job in promoting safety and reliability in its field than the American Gas Association, whose members produce products with a lethal potential at least as great as the automobile. But, by establishing rigorous safety standards, and granting the coveted AGA label only to gas appliances which meet those standards, this industry has commendably compelled its designers to think of safety first and styling second.

"In the realm of electrical appliances and fire protection devices, the pioneer UL symbol of the Underwriter's Laboratories has stood in the same enviable position for an even longer time. Here many different industries participate in paying the costs of brutal, impartial testing by an organization of hard-boiled experts, sponsored by the one group with the most to gain from safety: the insurance companies.

"Isn't this the real answer for the automobile industry? Why shouldn't they and the automobile insurance companies finance an impartial testing laboratory of their own—logically under the auspices of the Society of Automobile Engineers—and make an SAE seal of approval as valuable as the AGA or UL labels, and just as impervious to outside influences?"[5]

Yes, why shouldn't it?

Another writer has given the answer.

It is because the members of the SAE are first of all representatives of active financial institutions, and secondly, professional engineers.

Elsewhere,[6] I have described how the Society of Automotive Engineers backed the American Standards Association down when the latter sought to establish a seat belt standard. An industry vice president, speaking as a member of the SAE, threatened that the industry might make three moves: "first, it might resign as a member of the ASA; second, it might reduce its financial support to ASA; or third, it might refuse to participate in standardization projects in its area which might be undertaken over its objection."

No, it will take more than 41,000 dead bodies every year to get crash safety from the Society of Automotive Engineers.

Incidentally, the SAE seat belt standard at the outset was a poor copy of the Civil Aeronautics Administration standard, and only very recently has been revised to the General Services Administration standard.

The historic way in which the insurance industry has brought safe boilers and safe elevators into existence in this country has been by direct inspection and rating. Obviously, it cannot spend its valuable time in inspection of individual cars in use; but every year, two or three months before the new models appear, and long after style lines have hardened and become finalized, the automobile insurance industry can inspect and rate the crash-safety features. Does this bumper provide protection, or does it assure losses to the insuror? The bumpers on 1963 cars assure maximum damage, in the mildest contacts, to expensive fender, lights, and grilles. Does this frame allow extensive damage to the car interior (and the occupants)? Rate it up, and we can all be sure that next year, this frame will be different. With rigorous up-rating of those features that cause increasing losses to the insurors, the next year's models will likely be better, for the howl that the purchasers of certain makes emit will definitely be heard in Detroit.

In a series of very perceptive papers, Mr. W. P. Henderson in *The National Underwriter* has pleaded with the insurance industry to recover its legitimate role in the prevention of traffic deaths and injuries.

"In the early days of the automobile, an insurance credit or discount was given to the owner who equipped his car with a bumper. The discount for a front bumper was increased if one was also installed in the rear. These bumpers were sturdy, functional and protective units that eliminated or lowered repairs and hence reduced claim costs. The plan proved to be sound underwriting. This is a classic example of the product improvement influenced by sound underwriting, as bumpers soon became standard equipment.

"In the post-war years bumpers have lost their protective and functional aspect and the beautiful baubles that took their place are adding to, rather than, reducing insurance costs . . . "[7]

The basic principle on which the insurance business is founded is to charge a rate commensurate with the risk.

Medical examinations for life insurance are based solidly on this principle. Automobile casualty companies at long last are doing this for car drivers. *The time is long overdue for them to do the same for the car itself.*

A preview of what may be done was shown in the case of the twin-wrap windshield. This expensive, fragile, and optically dangerous windshield soon disappeared when the insurance companies added a three dollar surcharge to the comprehensive premium for cars with this windshield.[7]

Why haven't the insurance companies met their obligation long ago? It has been suggested to me that automobile money already controls some insurance companies, and that there has been a major threat by automobile money to enter the insurance angle just as it has the finance angle.

Perhaps this is a case of our expecting the tail to wag the dog. I know that the insurance industry is doing an excellent job in the realm of steam boilers, building construction. etc. We await with interest a demonstration that it can bring into being a motorcar in which it is safe to have an accident.

the legislative approach

The motorcar industry has shown its unwillingness to move ahead in the crash-safety field unless forced to do so by legislation. Threatened legislation by the State of New York forced the car makers to put built-in seat belt attachment points in 1962 cars. For years, the states have passed laws requiring higher and higher standards in lights, window glass, and turning signals. Safety glass was *not* the gift of the industry, as they so often tell us. It was the result of a very expensive law-suit.

A law by the State of California forced the carmakers to develop a fume control device, and laws by the States of Wisconsin, Kentucky, Mississippi, Virginia and New York made the carmakers decide to put two belts in all 1964 cars. Studebaker, again a leader in the field of safety, puts them in 1963 cars.

This piece-meal approach by the various 50 states has resulted in pure chaos. A practice in one state is criminal in a bordering state, as fuming tourists know all too well. This confusing and costly situation has led to the formation of the National Committee on Uniform Traffic Laws and Ordinances, (1604 K Street, N.W., Washington 6, D.C.) This work was started as long ago as 1926, at which time it was clearly evident that some degree of uniformity of traffic regulation in the United States was sorely needed. Despite formulation of the Uniform Vehicle Code, the disparity in local traffic regulations is still a national disgrace, and the cause of an untold number of traffic accidents.

In matters relating to the ubiquitous motorcar, it seems reasonable to me that Federal legislation is the logical answer.

Railway safety legislation beginning in 1893 took the form of Federal laws with detailed technical specifications, for example, the size of bolts, and strength of hand holds.[8] In today's fast-moving technology this approach is not recommended for the motorcar. Aviation history presents a far better precedent.

In 1911 it became obvious that aviation was progressing much more rapidly in other countries. When World War I erupted in 1914, it was reported that France had 1,400 airplanes, Germany 1,000, Russia 800, Great Britain 400, and the Unted States 23.[9]

On March 3, 1915, the National Advisory Committee for Aeronautics was established with a budget of $5,000. It was effective preparation for World War II, but too late for the war in progress. No American airplane fired a shot or dropped a bomb in anger in World War I. The American aces flew French or British planes.

The Committee consisted of twelve of the outstanding scientists in the United States, six of the twelve being members of the National Academy of Sciences. Under the committee's guidance and the rational co-ordination of research which it sponsored, aviation made excellent progress. Under its successor, the National Aeronautics and Space Administration, our rocket program is competitive.

It is my opinion that our continuing deaths and injuries on streets and highways warrant an all-out Federal effort.

I have pointed out that our motorcar dead, of the last sixty years, far exceed all of the war dead of 180 years.[10] This is a national emergency comparable to our aviation posture preceding World War I. In terms of loss of life and property destruction, it is a far greater emergency.

I suggest the formation of a national advisory committee for motorcar development. This would be a technical committee, employing the best scientific brains available. Its recommendations would be given over-powering weight.

The following proposed legislation, based solidly in the American tradition, as is the Pure Food and Drug, the Meat Inspection, the Civil Aeronautics, the Clayton, the various Railway Safety Acts, and others, is offered as a definitive solution to this increasingly serious national disgrace.[11,12]

Proposed Legislation to Help Solve the Motor Death and Injury Problem

A BILL

To reduce loss of life, personal injuries, and property damage resulting from automobile accidents by establishing a Bureau of Motor Vehicle Affairs in the Department of Commerce. This bureau, under an Assistant Secretary of Commerce for Motor Vehicle Affairs, shall have charge of Federal inspections of motor vehicles, and motor vehicle factories and the establishment and enforcement of minimum safety specifications of designs and construction to which all vehicles manufactured in and imported into the confines of the United States and its possessions must conform.

Sec.1. Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That it is hereby declared to be the policy of the Government of the United States to play a more vigorous role in reducing the tragic loss of life, personal injury, and property damage which occur annually as a result of automobile accidents on our Nation's highways.

Sec. 2. In order to carry out the policy established in the first section of this Act there is established within the Department of Commerce a Bureau for Motor Vehicle Affairs, under an Assistant Secretary of Commerce for Motor Vehicle Affairs (hereinafter referred to as the "Bureau" and "Secretary", respectively). The Secretary shall be appointed by the President, by and with the advice and consent of the Senate.

Sec. 3. The President shall also appoint, by and with the advice and consent of the Senate, a National Advisory Committee for Motorcar Development (hereinafter referred to as the "Advisory Committee") to consist of seventeen members, of whom no more than seven shall be members of the National Academy of Sciences. The Advisory Committee shall at all times have within its membership a physicist, a sociologist, a representative of the General Services Administration, not more than one representative of the motorcar industry, at least one representative of the aircraft manufacturing industry, four Doctors of Medicine (of whom one is a neurosurgeon), four engineers (apart from the representative of the motorcar industry) and such others as the President may feel may be contributory.

Sec. 4 The functions of the Bureau shall be to: (1) provide safe motor vehicle transportation for the citizens of this Commonwealth; (2) provide economical motor vehicle transportation for the citizens, because motor vehicle transportation for individuals has long since ceased to be a luxury item, and basic individual transportation of an efficient, economical nature is a fundamental need and right of the citizens of the modern Commonwealth; (3) integrate the development of the motorcar with the development of that factor without which it cannot operate efficiently, our public roads.

Sec. 5. It shall be the duty of the Secretary, pursuant to Sec. 4, (1) above to require the motorcar manufactures to incorporate in their products those designs and devices which the Advisory Committee by a majority vote of its entire membership shall recommend. These designs and devices shall appear and be maintained in all motorcars produced after not longer than twenty (20) months of the vote of the Advisory Committee. The Bureau shall maintain in every factory Federal inspectors to the number deemed necessary to enforce the provisions of this Act. Every motor vehicle shall bear the Bureau mark of approval, a non-corrodible metal plate, bearing the manufacturer's serial number, durably attached, under the supervision of the Federal inspector, to the motorcar in a conspicuous place. If the Secretary at any time believes that a manufacturer is willfully or negligently not conforming to the provisions of this Act, he may halt, by Federal injunction, the manufacturing processes of this manufacturer. A levy for the costs of the inspectors' salaries and inspection processes in each factory is to be made against the factory, and paid into the Treasury of United States quarter-annually. It is provided that the members of the Advisory Committee, as such, shall serve without compensation, except that travel and accommodations of the first class shall be provided for all those members who are not Federal employees, in which case travel and accommodations shall be provided by the Service of which the committee member is an employee. The Advisory Committee shall meet regularly twice a year, with such special or emergency meetings as shall be deemed necessary by either the Chairman of the Advisory Committee (who is to be elected by the members annually) or the Secretary. An Executive Committee of the Advisory Committee shall be formed consisting of seven members charged with administration of the affairs of the Advisory Committee, and general supervision of all arrangements for research.

Sec. 6. The Congress recognizes (from the experience of the National Advisory Committee for Aeronautics, the Civil Aeronautics Administration, and the Civil Aeronautics Board) that independent research may be demanded by the necessities of the problem, not, perhaps, to the extent that has been required by the NACA, and CAA, but to the extent needed to carry out the purposes of this Act.

Sec. 7. Such appropriations as are necessary to carry out the provisions of this Act are hereby authorized.

I am sure that some of you are thinking, "but we already have the President's Committee for Traffic Safety. Surely, it is the best, and why have another?"

The President's Committee is a "public support" medium, by charter. It is privately financed and is beholden to the donors, just as is the American Standards Association. In its present constitution it cannot and will not involve itself in any way in the matter of vehicle design and construction, the definitive factor in our traffic death and injury problem.

It is my opinion, belonging to the Patrick Henry school, that we must solve the traffic death and injury problem just the way that we solved our previous serious health problems. The recent thalidomide affair should have some lessons for us in traffic safety. ■

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Automotive Safety Research at General Motors Proving Ground

LOUIS C. LUNDSTROM, M.S. Milford, Michigan

Doctors and engineers may not speak the same language, but they do have a lot in common—particularly, a natural interest in providing for the welfare of their fellow men. This presentation will, I hope, show you some applications of this common humanistic interest that are not well known outside the automobile industry.

Doctors are interested in research which can save human lives. So are automotive engineers. I would like to describe to you some of our safety research at General Motors Proving Ground. This is a large subject—so large that I can allocate only a few minutes for each test or phase of the work. During the available time, I hope I can also show you how the results of Proving Ground experience and safety studies can be applied on our public highways to reduce the number and severity of accidents. I want to

abstract

LUNDSTROM, LOUIS, M.S. (General Motors Proving Ground, Michigan, USA) Automotive Safety Research at General Motors Proving Ground. Northwest Med. 62:615-624 (Aug) 1963.

Test cars are driven an aggregate of 50,000 test miles daily on the General Motors Proving Ground. Tests are for durability, reliability, maneuverability and safety. Dummies are equipped with recording devices for testing protection of passengers in a car subjected to impact of various types and various degrees of severity. Snubbing devices and impact sleds are used for non-destructive testing. At least 40 cars are destroyed each year in destructive tests including impact with barriers and roll over experiments. Photographic analysis utilizes all types of pictures including motion pictures at 3,000 frames per second. A 15 g impact represents collision with stationary object at 21 miles per hour. The unrestrained dummy shoots forward, crushes the dash with his knees, pivots, with his head smashing a hole through the windshield. Use of seat belts is strongly recommended. Drivers at the proving grounds are average individuals but their safety record is impressive. One group of 90 men drove 1,750,000 miles without accident of any kind. Majority of accidents at the Proving Ground occur between 3:00 and 7:00 in the morning, in spite of the fact that drivers must sign in every hour during the night shift. The concept of highway hypnosis has not been substantiated by experience at the Proving Ground.

abstracto

LUNDSTROM, LOUIS C., M.S. (General Motors Proving Ground, Milford, Michigan, USA) Automobile Safety Research at General Motors Proving Ground. Northwest Med. 62:615-624 (Aug) 1963.

Los carros de prueba son corridos un promedio de 50,000 millas diariamente en las pistas de la General Motors. Las pruebas cubren que tan durable, confiable, maniobrable y seguro es el automóbil.

Muñecos equipados con aparatos de grabación, se usan para determinar la vulnerabilidad de los ocupantes en un carro sujeto a impactos de varios tipos y grados de severidad. "Snubbing devices" y "Trineos de impacto" se emplean en pruebas no destructivas. Por lo menos 40 carros se destruyen anualmente en pruebas que incluyen choque contra vallas y volteaduras. Se usa análisis fotográfico con diversos tipos de película hasta de 3,000 tomas por segundo.

Un impacto de 15 "g" (g=una fuerza de gravedad) significa el choque de un carro corriendo a 21 millas por hora contra un objeto estacionario. El muñeco sin cinturón de seguridad, salta hacia delante, pega con las rodillas en el panel, el cuerpo gira hacia delante y la cabeza se estrella contra el parabrisas. El uso de cinturones de seguridad se recomienda enfáticamente. Los choferes empleados en esta clase de pruebas son individuos de tipo común, sin embargo tienen un record de precaución excelente. Un grupo de 90 manejó 1,750,000 millas sin tener accidente de ninguna clase.

La mayoria de los accidentes en las pistas de prueba ocurren entre las tres y siete de la mañana a pesar de que los choferes deben reportarse cada hora durante el turno de noche. El concepto de "hipnotismo de la carretera" no se ha podido comprobar en las pistas de prueba.

show you examples of the action we have taken to provide maximum safety on our Proving Ground road system, and the results of this action: The Proving Ground is the safest place in the world to drive.

Accident prevention is my favorite subject. Prevention is the real key to the reduction of accidents and fatalities, and it can be accomplished by known methods—at a reasonable cost.

Automotive safety research shown is an important part of the day-to-day activity at the General Motors Proving Ground. Over 50,000 test miles are run daily on the 65 miles of test roads.

Safety testing involves, first of all, the vehicle. Most important to your safety as a motorist is the excellent durability or reliability built into the modern motor vehicle. This is our first step to accident prevention. The durability driver is given exacting instructions so the results will be conclusive. Final durability evaluations are conducted over test roads. Some are of ordinary blacktop with twists and turns. There is a section of dusty gravel. In one area there are rough Belgian blocks, of granite, set in concrete at random heights. There is a test track, for turnpike speeds. There are long, steep, paved hills and even steeper, short grades.

After 36,000 miles of round-the-clock operation, the durability cars undergo a complete teardown and inspection. Good durability pays off on highway operation, and vehicle failures cause only a small percentage of accidents. Most of these are the result of poor maintenance by the owner and could be prevented by regular inspection and service.

While durability and reliability tests are run on one fleet of cars, precision safety tests are run on others. A few typical safety tests of the vehicles' performance capability include: brake tests under panic conditions; wheel, tire, and suspension tests on severe cornering, or J-turns; stability tests during deliberate front tire blowouts; safe stopping distance tests at night, using low reflectance dummy; and handling stability tests in cross-winds.

Good vehicle operating characteristics developed on tests like these, pay off in accident prevention by giving the driver maximum controllability under all conditions.

Still other vehicles are taken to the laboratory for measurements of: door lock durability; spring rates, roll stability, steering geometry; and dynamic loading of the wheels and suspension.

Unfortunately our accident prevention doesn't work 100 percent of the time, so it is necessary also to test for impact conditions: seat belt strength in static test machine; seat belt test under dynamic conditions; and dummy drop on steering wheel. See figures 1-3.

Also in the laboratory, the test dummies are checked and made ready by installing instrumentation in chest and head cavities. Dummies are then installed in lab test fixtures and in cars for road tests.

Then complete vehicle impact and roll-over safety tests are run. These include car-to-car impact test; barrier impact test; and roll-over test. See figures 4-6.

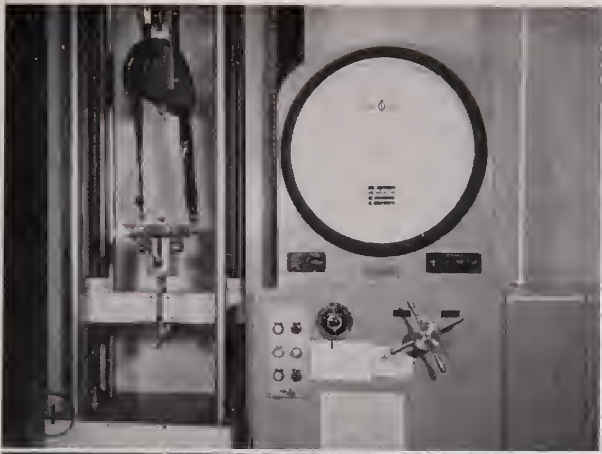
Vehicle safety tests are not new. Result of a 1930 roll-over test is shown in figure 7, just in case you're one of the old-timers who say "they don't build them like they used to." Be glad we don't! The car of modern vintage is not only more difficult to roll, but survives the roll with nothing more than sheet metal dents, (Fig. 8).

These are representative safety tests run at the Proving Ground. Each year we smash approximately 40 cars in the Proving Ground safety test program. Yes, safety testing is expensive, but the car is the least expensive part of the test. Each test costs several thousand dollars for engineering, instrumentation, high speed photography, and data reduction on the computer, beside the cost of the car itself.

seat belts

There has been a great amount of publicity and talk about belts, but not too many people really know how or why they work. Some may expect too much protection from a belt. They are *not* the complete solution to occupant safety. They may offer protection in many kinds of accidents—and I hope you wear yours as regularly as I wear mine.

Figures 9 and 10 will help illustrate conditions inside a car during a front impact. Without a belt, the passenger slides forward, knees hit the dash, the upper body folds forward, and the head contacts the windshield. Very tall people will actually contact the area of the sun visor; short people will strike the dash. In contrast to this, the person with a belt slides forward until the belt is very tight, and then decelerates along with the seat and car interior. The upper body does hinge forward, but in most impacts will not be injured. It is difficult to predict accurately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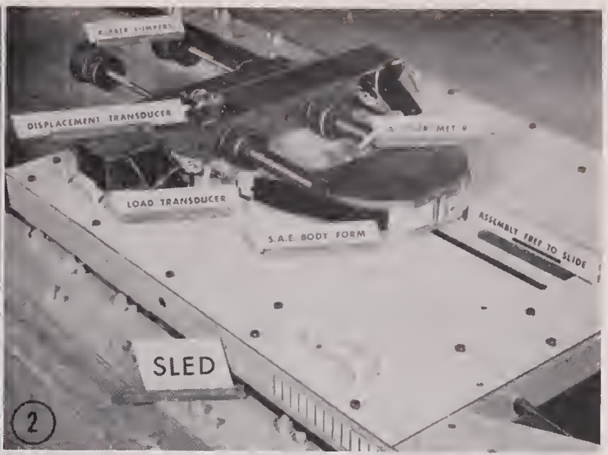
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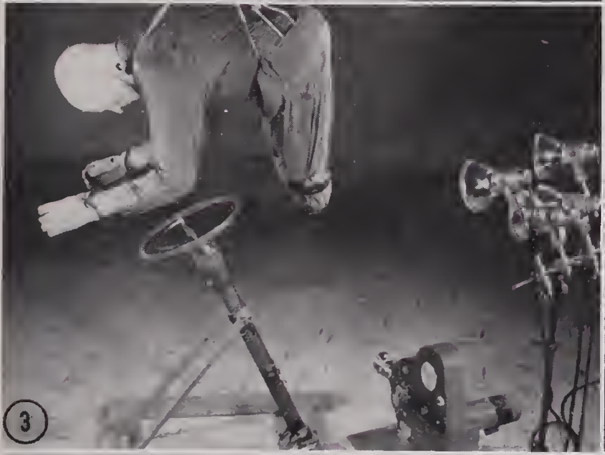
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with test dummies what will happen to a human under similar conditions, but the seat belt does transfer the kinetic energy from the body to the car structure. Without a belt, this energy must be absorbed in the contact between the body and the forward portion of the passenger compartment. I think you can visualize more exactly than I what this means to the passenger.

impact tests

The barrier test is very severe, because the test vehicle hits squarely on the face of the barrier, and the tons of concrete and earth behind the wood face are immovable. The test car is driven by remote control and approaches the barrier at a predetermined speed, usually a standard 30 mph. High speed motion pictures of the dummy restrained with seat belt show that even under this very severe condition, the belt effectively keeps the dummy from contacting the forward dash and windshield, (Fig. 11).

These barrier tests are run on vehicles of all sizes. Figure 12 is a picture of the largest and most complete barrier test ever performed. This is a 41-passenger, rear engine, suburban coach. Four types of seats were tested on this one impact, and 28 dummies were used, ranging in size from a 200-lb, 6-ft man to a 45-lb, 5-year-old child. Ten motion picture cameras were used to record the results. Weeks of work were required to study and analyze and report the results of this test, that took just one-half second to run.

Barrier impacts are so expensive that the number of tests that can be scheduled is definitely limited. Snubber equipment was therefore developed at the Proving Ground to jerk a car to a stop, simulating an impact without destroying the test car. This first test at 15 g's simulates the barrier test, and the seat belt protects the dummy passenger from injury.

In a repeat test at the same 15-g deceleration, but without the seat belt, the dummy passenger smashed against the dash and windshield.

In still another test the dummy was restrained by shoulder harness. The body was held away from all possible contact with the car interior.

The desire to reproduce a simplified accident has led most recently to the development of the impact sled. This device, operated by compressed air, duplicates the longitudinal deceleration conditions of an impact indoors. In an actual crash, the test vehicle moves at a constant velocity and is stopped very rapidly. With the impact sled, a test vehicle at rest is accelerated very rapidly, (Fig. 13).

This equipment is being used to evaluate virtually every component that affects occupant safety. Test samples such as door locks and body sub-assemblies can be mounted on the impact sled at any angle or position to simulate a variety of impact conditions. Engine and transmission mounts can also be tested to determine their behavior during shock loading. One of the first test series conducted on the new facility was an evaluation of front seat passenger kinematics with and without seat belts.

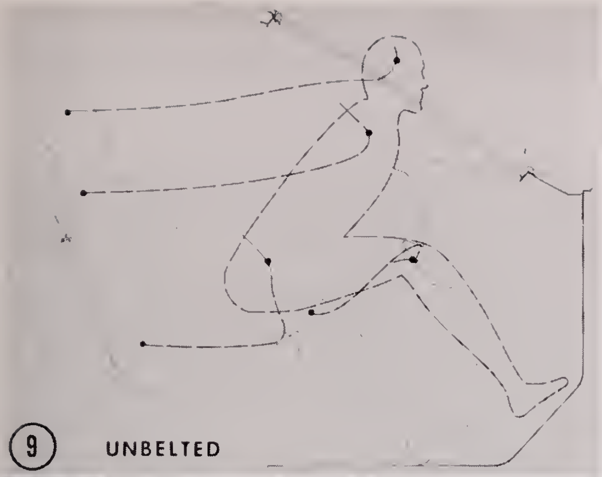
We were especially interested in comparing the motions of the dummies on the impact sled with those recorded in previous barrier and car-to-car impacts. A partial vehicle body was mounted on the sled. The targets on the head, shoulder, waist and knee of the dummy, and on the vehicle, were used for calibration and analysis of the high speed motion pictures. The analysis, by the way, showed a good correlation between impact sled testing and actual full-scale vehicle tests, (Fig. 14).

The dummies used for the front seat passengers represent average males 5 ft. 7½ in. tall weighing 165 lbs. This first test at 5 g with seat belts was slowed down through the use of high speed photography so that the motions of the dummies could be carefully analyzed. The same test can be studied by many cameras at different locations.

In the past, our outdoor crash tests were limited by available light and weather conditions. On this new indoor test facility, banks of incandescent floodlights give us enough illumination to take high speed motion pictures at film rates as high as 3,000 pictures per second.

The difference between the restrained and unrestrained passenger at the 5 g level is clearly noticeable. This 5 g simulated impact represents a 10-mph collision with an immovable object. High speed photographic coverage is supplemented with other instrumentation to record various forces, accelerations, and contacts that occur during the test.

By studying the action of the dummies and the forces involved during these tests, the design engineer can obtain data to provide better protection for both the restrained and unrestrained passengers. At these low levels, a lap belt prevents one passenger from contacting the windshield, but the head of the unrestricted passenger dummy breaks the windshield. The action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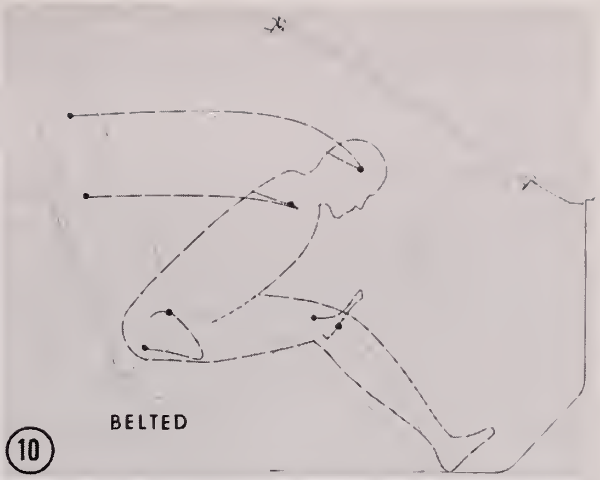
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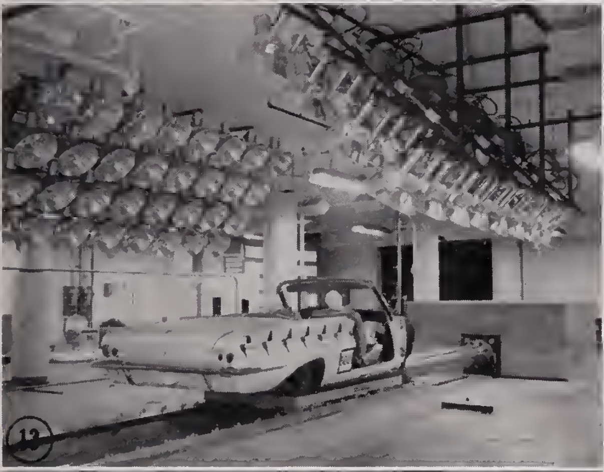
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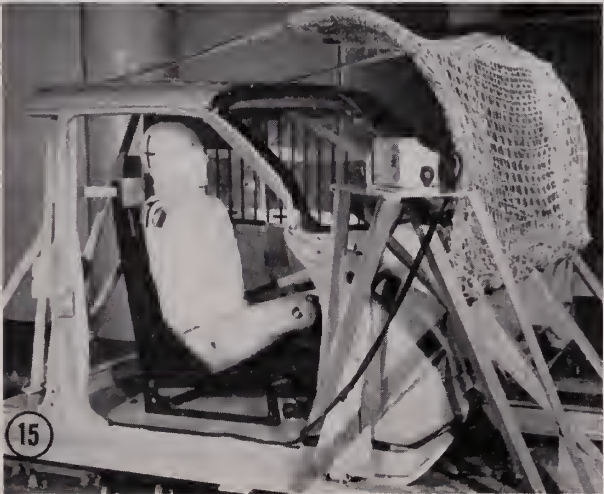
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is reviewed again with the overhead high speed camera. Analysis of the damage after these low-g-level impacts is beneficial in indicating the type and extent of injuries the passengers might have received.

As the g level is increased, the action of the dummies becomes more violent. The 10-g impact is comparable to a 15-mph collision with an immovable object. At the completion of each test, a thorough analysis is made of the injuries to the dummies and the contact areas. At this impact level, the deflections of the restraining system increase and the head contact of the passenger dummy becomes important. With increasing speed the path of the unrestrained passenger becomes more directly forward and his penetration into the windshield increases.

The areas of contact made by the passenger dummy can be determined by chalking the various parts of the dummy before the test. The chalk then marks the impact areas on the interior of the vehicle. The forces of the blows can be measured by instruments on the dummy legs.

safety glass

The characteristics of windshield glass breakage vary as the velocity of the head impact changes. A 15-g impact with lap belt restraint is comparable to impact with an immovable object at normal residential driving speed of about 21 mph. Without the use of a restraining device, at the 15-g level, the passenger dummy moves forward, crushing the dash with his knees, then pivoting and pushing a hole into the glass with his head. The positioning of the high speed cameras can aid in the careful analysis of tests of this nature.

To evaluate head laceration effects of windshields, a special fixture was built to mount on the impact sled. The high speed motion picture camera was mounted upon this fixture to record at close range the contact between the special dummy head and the glass. The dummy heads are made of a foamed plastic, covered with goatskin, which gives a realistic evaluation of the lacerating properties of the windshield. The net on the front of the vehicle catches the flying fragments of glass and protects the mechanism. (Fig. 15)

High speed pictures from the side of the vehicle slow down the action so characteristics of the test can be studied. The camera mounted on the vehicle gives a clear view of the nature of the windshield fracture and the motion of the head as it penetrates the glass. The vertical black lines on the plexiglass behind the dummy are used to compute head velocity just prior to contact with the windshield. The goatskin, of course, does not have exactly the same properties as human skin, but the cuts or lacerations are quite realistic.

Very violent accidents can occur, and this test is a demonstration of what can happen to five people riding in a vehicle when it rams an immovable object at approximately 45 mph. The unrestrained passengers in the rear travel freely forward, compressing the front seat passengers into the dash and then contacting the windshield.

We are already making extensive use of this new device in evaluating and developing safety aspects of motor vehicles. It should be emphasized, however, that the impact sled is intended to supplement our overall crash testing program. It will not replace many forms of full-scale vehicle impact or roll-over tests, but it has already become an extremely valuable laboratory tool for precise and repeatable safety testing of vehicles and vehicle components.

I hope that after seeing these pictures you will wear your seat belt home tonight and every time you drive or ride in a car. If you have a family, rear belts may be used, too. My own car is one of the few equipped with *six* seat belts, and our family of six uses them constantly.

glass tests

The pictures of the impact sled tests show dramatically the seriousness of the windshield problem. More than 200 tests were run at the Proving Ground in 1962 to evaluate the strength, and injury potential, of laminated windshields of different thicknesses.

Accelerometers in the dummy head cavity indicate the severity of the impact against the windshield. Thicker glass would not break as easily, and thus the lacerations would be reduced. However, the thicker glass would obviously increase the degree of concussion and brain damage. The auto industry, through the Society of Automotive Engineers, is pooling its knowledge and research to determine the best compromise.

The advantages of other types of glass are being evaluated again. In this country, laminated safety glass is required by law. In Europe, tempered glass is required by law. Unfortunately, accident records have not been kept well enough to prove which type is safer in actual accidents.

Side glass is even more controversial. Your Washington legislature has a bill before it now which would require the use of laminated glass in side windows. The legislature of the State of Connecticut, however, is considering a bill requiring the use of tempered glass. Tempered glass is harder, and breaks into many small fragments that are not too sharp. Laminated glass of the same thickness is not as tough, and breaks into fragments that are bonded to the inner layer.

Windshield and side glass present one of the industry's most difficult safety problems. If you are inventive, you might help to develop a rubber windshield, strong enough to keep a person in the car in an accident, yet as clear as glass.

door locks

Another important area of safety research is door locks. Here again, people do not generally understand how they work and what they are required to do.

The modern door lock has the following elements: body of lock; latch mechanism to hold door closed; lock mechanism to prevent theft; release button - inside; release button - outside; and interlock - to hold door closed in case of accident.

Door locks are required to pass a series of controlled, rugged tests. The first is a laboratory door slam test to be certain that the lock will operate for the expected life of the vehicle. 50,000 cycles are normally required without failure or need for adjustment on current production designs. Experimental designs must operate twice that long - 100,000 cycles - without failure before they are accepted for use.

The second in the series is 1600 miles over rugged Belgian block and other severe road operation. During this run, the door is subjected to repeated extreme loadings by the push bar.

The third test is the complete vehicle rollover. The test car is towed up to speed, released, and turned abruptly off the roadside. This appears to be simple, but with today's low-slung cars, the roadside must be in the proper condition or the vehicle will skid rather than roll. Extreme deformation of the body puts a very heavy load requirement on locks.

The final and most severe test of door lock performance is the car-to-car side impact. When the point of impact is just behind the door opening, the tearing and pulling of the sheet metal tends to separate the lock. This test, and others like it, show that modern door locks do have the strength to withstand this type of impact, (Fig. 16).

These examples of automotive safety research and testing describe some of the work involved in the development of a modern motor vehicle. While this work is in process at the Proving Ground, other groups in General Motors Research Laboratories, Engineering Staff, Styling, and the Car Divisions are conducting other studies and considering new design concepts for vehicles of the future. This continuing effort plus the opportunity and challenge for new designs made possible by the annual model change will provide continuous product improvement year by year.

vehicle inspection

Our interest in the vehicle does not stop at the time it is sold. Auto companies encourage the owner to bring his car in for normal service and safety inspection by the dealer. They support the voluntary safety check lanes that have been set up in many communities. The auto industry also encourages periodic inspection, as required now by law in 20 states.

Studies indicate that one out of five cars has some defective safety equipment due to poor maintenance. Some of these conditions will result in accidents. These are preventable. We are so aware of the importance of safe vehicles that we inspect Proving Ground durability test cars every 1500 miles. As you might expect, we have eliminated practically all accidents due to vehicle neglect and failure.

drivers

Solving the driver caused accident problem is not so easy, but significant gains have been made at the Proving Ground. I think you will be interested in a brief description of our experience and success.

Most test drivers are men in the 21-40 year age group, hired from the cities, villages, and farms near the Proving Ground. Less than 1 per cent are professional race drivers. The training these men receive is largely informal, but their first instruction is provided in the office of the safety supervisor. This session is devoted to a general discussion of safety principles and emphasizes the reliance placed on each driver to learn and follow Proving Ground safety rules and traffic regulations, both for his own safety and the safety of others. Following a routine physical examination, and a discussion with the driver foreman, the new driver is ready for his training on the road. The first day he rides with an experienced driver, observing the traffic pattern, learning the scheduled speeds and stops. After a day or two, the new man drives the test car, with the experienced man observing and coaching as necessary. After three to five days, the new man is given his driving schedule and is on his own. There is nothing particularly enlightening about this training problem. I have taken your time to describe it, because these ordinary people, from all walks of life—farmers, teachers, tugboat captains, golf pros—can and do establish remarkably safe driving records.

In 1960 we developed a trophy for the first group of drivers who could accumulate one million miles without an accident — not even a scratch on a fender. One group of 90 men promptly posted 1,750,000 miles before one of their group misjudged a gravel curve and knocked over a roadside delineator post. Another group of 30 men drove over 3,500,000 accident-free miles, establishing our best record to date. Altogether, four different groups have earned the trophy at least once. Such records are 30 times better than any public highway experience, and they indicate that, with proper selection or licensing, routine physical checkups, basic training and regard for common safety rules, the average American can drive safely.

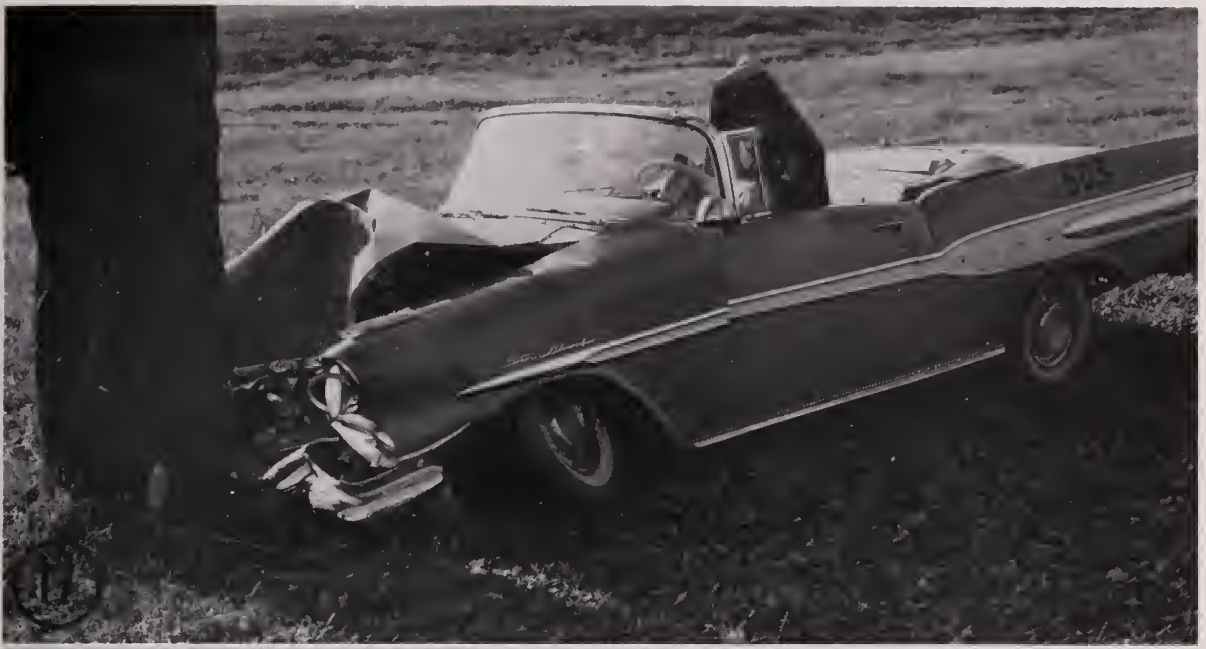
I do admire and credit the test driver for an exceptional job, but he does require a safe base of operations. Before departing from the driver, however, I would like to state that one of his greatest problems is drowsiness. Test driving goes on 24 hours a day, but each man's shift is limited to 8 hours. He does not, therefore, have a difficult assignment, but it is definitely monotonous. A study of Proving Ground accidents caused by drowsiness shows an alarming number concentrated in the hours near daybreak.

About 73 per cent occurred between 3:00 and 7:00 o'clock in the morning. We do have a project under way to observe and study drowsiness, but do not have a solution to the problem. In an attempt to overcome the problem, drivers are urged to return to the garage when sleepy; in fact, they must sign in every hour during the night shift. I have great interest in this particular problem, and would like to comment, in this regard, on "highway hypnosis." Our own experiences would indicate that more drivers doze when in a curve than on straight sections. Why, then, are we so concerned about the relatively straight interstate highways? I have not seen the "highway hypnosis" claims documented, and am concerned that the public is being influenced out of proportion to the facts. I am also concerned because the introduction of curves will reduce the ultimate speed capacity of our Interstate Highway System, reducing its capacity and safety in years ahead.

There are other driver problems that could be related if time permitted, but I should limit my remarks to observation of ordinary drivers during blowouts. For this experiment, clerks, secretaries, bookkeepers, and laborers were asked to drive and comment on the operation of an experimental car. During this drive, a front tire was blown out using a dynamite cap and remote switch. In most cases, the element of surprise overcame the driver's normal reaction, and the car drifted out of lane before the driver added the proper amount of corrective steering. Additional experiments confirmed our earlier knowledge that the car itself is completely manageable during such conditions. When the driver knows a tire is to be blown, he can always keep within a 12-foot lane. Therefore, we must, by educational programs, inform the public to be alert for any emergency, and let them know that the car can be driven safely even with a flat tire. Too many advertisements imply that a blowout is an accident. This can cause the driver to panic unnecessarily and lose control. Proper instruction can build confidence and prevent unfortunate circumstances.

roadside hazards

We have discussed the driver, the vehicle, and the roads, and have emphasized that good safety records can be established. To be realistic, however, we know that some vehicles, for some reason, will deviate from the path and leave the prepared roadway. This can happen to a sleepy driver. It might happen as the result of vehicle failure. Unexpected traffic pile-ups will at times force a car off the road. Slippery road surfaces or errors in driver judgment will put other cars off the road. Knowing that these conditions will occur, we have developed the concept that we must provide a safe escape path. This is equiva-



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lent to putting a guard on a machine—just in case something unusual happens.

One-car off-the-road accidents account for approximately one-third of the highway fatalities in the country. Elimination of hazards on the public roads would make an important reduction in the number of accidents and fatalities.

First, it is all too obvious that trees are a major hazard along our roadways. Even low speed impacts such as this 35-mph remotely controlled crash produce fatalities and injuries, (Fig. 17). Roadways can and must be landscaped with shrubs and bushes instead of trees. We are actually planting more trees and bushes on the Proving Ground than have been removed, but they are a safe distance from the roadway.

Man-made ditches are the second major problem. Cars and occupants simply do not have a chance on standard roadsides. A car moving at highway speeds is demolished when it plunges down a standard sideslope. Cars running into a standard cut section are also damaged and the occupants injured.

Flatter slopes with rounded contours can be driven without difficulty and with less chance of roll-over. We do not use slopes steeper than 6-1 on the Proving Ground.

Signs are a hazard along all of our new system of Interstate Highways, and the short sections of guardrail are not adequate. Figure 18 is of a test section at the Proving Ground with orange boxes in place of the sign post. The impact was at 20 degrees, 65 mph. This is far from adequate protection. Additional length of guardrail is definitely required.

Light and utility poles are another major hazard, particularly along city streets. Tripod poles have been designed and tested at the Proving Ground to show that there is a safe way. Here the legs of the pole shear off at ground level, with only a scratch on the car, (Fig. 19).

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Ordinary highway marker signs are a hazard when mounted at the standard 42-inch height. Tests show how the sign shears off, hitting the windshield. Higher mountings recommended by the Proving Ground permit the car to pass harmlessly beneath the sign.

Guardrails are a poor substitute for a good roadside, but they need to be used at bridge approaches, sharp cuts, bridge piers and signs. We started testing guardrails several years ago simply to find what we needed for our own use at the Proving Ground. Full scale tests of the new materials had not been run. Much to our surprise, we soon found ourselves guardrail experts. The first tests confirmed our opinion that old installations were of little value.

Later tests were with the newest standard highway guardrail. This rail holds and turns the car properly, but the occupants experience a severe jolt. A repeat test showed the marginal character of the rail. The rail pocketed slightly, throwing the car back on the road. A third test showed that impacts near the end of a section pull the rail loose, snubbing the car to an abrupt stop.

Short sections are not adequate. The car is often trapped, with very high decelerations. Or, if the rail yields, the car jumps over. End anchors are never used on the public highways.

End hits mean either high decelerations or piercing of the passenger compartment. An improvement can be made here by bending the end sections down, providing a ramp.

One of the most interesting new guardrails is a combination wire fence and cable designed and used in California on their narrow medians. A car hitting this rail is snared and usually decelerated at a nominal rate. A repeat test, though, showed that the fence can tangle on turnbuckles, stopping the car very abruptly.

We firmly believe that highway accidents and fatalities could be reduced significantly by elimination of roadside hazards. Most of the Proving Ground roads have already been improved and our accident record indicates this is the safest place in the world to drive.

I would suggest that you carefully observe the roads you drive each day to identify the roadside hazards and to decide in your own mind the improvements in safety that can be realized by this new concept of safe roadsides. *In our travels from coast to coast, we have never found a continuous mile of any public road that was free from all roadside hazards.* ■

General Motors Proving Ground
Milford, Michigan

Abdominal Injuries

VICTOR RICHARDS, M.D. San Francisco, California

There are in general two types of abdominal injury. One is the result of blunt, non-penetrating trauma in which it is possible to get rupture of intra-abdominal viscera, perforation of stomach, colon, esophagus, rupture of spleen, or injury to some of the blood vessels inside the body even though the skin has not been broken. The second type of injury is the one in which there is actual penetration by a foreign body so that we have much more likelihood that something has actually happened to a viscus. You have to think of both kinds of injury and be alert to the possibility that either type can result in a con-

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abstract

RICHARDS, VICTOR, (Stanford University School of Medicine, Palo Alto, Calif., USA) Abdominal Injuries, Northwest Med. 62:625-630 (Aug) 1963.

Signs of peritoneal irritation, regardless of substance causing them, are warning of intra-abdominal injury. Early blood count, urinalysis, hematocrit, and x-rays are necessary. Films should be taken with the patient supine, in lateral decubitus, and erect. Needle aspiration gives valuable information. Transfusion and vasoconstrictors combat shock but resulting elevation of blood pressure can prolong bleeding. Failure of blood pressure to rise indicates bleeding. Tracheotomy and assisted respiration may be necessary. Knife wounds should be explored and the abdomen opened if the peritoneum has been penetrated. Bleeding from the liver can usually be controlled by packing. Wounds of the posterior wall of the stomach are easily missed and closure should not be completed until inspection has been carried out through opening into the lesser sac. Wounds of the duodenum should be closed with two layer suture but are subject to leakage if there is also injury to the pancreas. Drainage is used for the latter. Injured spleens should be removed, not sutured, and delayed rupture should be anticipated since it is frequently fatal. Many colon wounds should be exteriorized; others should be protected by proximal colostomy. Ureteral wounds should be sutured over a splint; bladder wounds should be protected by cystostomy after suture. Neomycin may be used to combat intra-abdominal infection but may require respiratory support for a short time.

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abstracto

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Signos de irritación peritoneal, independientemente de su etiología son indicativos de lesion intra-abdominal. Cuenta de glóbulos blancos, urinalisis, hematocrito, y rayos X son exámenes necesarios. Las radiografias se deben tomar con el paciente en posiciones supina, de decúbito lateral y erecta.

Aspiración con trócar rinde información valuable. Transfusiones y vasoconstrictores combaten el shock, per la resultante elevación de la presión sanguínea puede prolongar la hemorragia. Por otro lado, si la presión no sube, a niveles normales, significa hemorragia. Traqueotomía y respiración artificial pueden hacerse necesarias.

Las heridas punzantes deben ser exploradas, con laparotomía si el peritoneo ha sido lesionado. Hemorragia de heridas de hígado, á menudo se controla con taponamiento. Las heridas de la pared gástrica posterior pueden no ser muy aparentes y el cierre del abdómen no se debe efectuar hasta que se haya inspeccionado la cavidad epiploica menor. Las heridas del duodeno se cierran con sutura doble, y aun asi estan sujetas a derrame si hay lesión pancreática concomitante. En esos casos, se deja una sonda de drenaje. Bazos lesionados se extirpan, no se suturan y la ruptura tardía se debe anticipar, puesto que usualmente es fatal. Unas heridas del colon se exteriorizan, otras se protejen con colostomía proximal. Heridas ureterales se suturan "sobre una sonda", heridas de la vejiga se protejen con cistostomía despues de suturarse. Neomicina puede emplearse para combatir infección intra-abdominal aunque raramente parálisis respiratoria puede sobrevenir si la cavidad peritonea se irriga con este antibiólico y el anestesiólogo ha de estar prevenido contra esta complicación.

dition that may require emergency surgical repair.

warning signs

Regardless of the type of injury with which we are dealing, there are certain clinical signs to which we are alert in any patient who has abdominal injuries. These are signs of peritoneal irritation. Regardless of whether the irritation is the result of blood being spilled into the abdominal cavity, of bile being spilled from injury to the liver or the gall bladder, or of feces from a laceration of the large bowel, the clinical picture we are confronted with is the result of peritoneal irritation.

These signs I want to emphasize at the moment. I am sure you are aware of most of them. I want to emphasize the fact that regardless of what is producing peritoneal irritation, what you see clinically is essentially the same. The individual will have muscle guarding, tenderness on palpation or percussion, and dimished peristalsis. He may have some fever as the only sign of peritoneal infection. If any of these clinical findings are present or all of them are present, we must alert to the fact that we may well be dealing with an intra-abdominal injury. This requires an emergency operation.

In the evaluation of these signs there are certain laboratory data which will be very helpful. Laboratory data are most helpful if you can get an early routine blood count, urinalysis and hematocrit. Then add a repeat hematocrit. This in general will give the information needed when trying to assess the question of intra-abdominal bleeding.

If the urine is completely clear the patient in all probability does not have any serious injury to the urinary tract. Catheterization should be done if the patient can't void. If there is any blood in the urine, a separate evaluation of the urinary tract will be necessary.

x-ray

The next helpful laboratory information comes from the x-ray department. Films should be taken with the patient supine, in lateral decubitus, and upright. After the first two are taken the table may be tilted for the upright position. This is a chest film rather than one of the abdomen. In addition to showing gas under the diaphragm, it can indicate damage to esophagus or aorta if the mediastinum contains gas or appears to be widened.

These two things are basic. Once you get beyond this, there are a few additional tests which are very valuable if you are suspecting certain common types of injury. One is to get an amylase test immediately. This particular procedure is now available on emergency basis in almost every hospital. It will probably give you the best clue you can get as to whether or not there is injury to the pancreas which might be of a serious nature and require surgical treatment.

aspiration

If you are worried at all about a lesion of any type in the abdominal cavity, needle aspiration is a very worthwhile procedure. It can be done in all four quadrants of the abdomen. An eighteen gauge spinal needle may be used. One of the disadvantages of the eighteen gauge spinal needle is that you don't get very far in the abdominal cavity with safety. Many people favor a fourteen or sixteen gauge needle. They insert it into the abdominal cavity and then thread through this a polyethylene tube which can move freely around the abdominal cavity. Aspiration may yield information about fluid, pus, or blood, that may be free in the abdominal cavity. It is an extremely simple and desirable technique which you can use to advantage in management of abdominal trauma.

An item that would serve this purpose is the Deseret Intracath needle. It is being used frequently now for administration of fluid. It is generally available. These are the major things that I think that we should do.

I have found that there are certain special circumstances where you can get additional information that is very helpful. The two emergency x-rays that I have found most helpful are the intravenous pylogram and emergency visualization of the biliary tree by intravenous cholecystography. You may also use this in examining individuals suspected of having acute cholecystitis. It is very helpful, at such times, to do these x-rays on an emergency basis. At first the radiologist will object to it, but I think you can pursuade him that he too can be a clinician and help you in these particular problems by doing some of these studies on an emergency basis.

blood volume

If the patient is really in shock, you are going to have to start administering blood. If you administer blood, you have to give it in adequate amount. You have to give it rapidly. A common error is to under-treat the patient who is bleeding and getting blood, but whose blood pressure continues to be low.

There is a question about use of vasoconstrictors. There are a whole host of good pharmacological aids now to constrict the blood vessels. These will, of course, raise the blood pressure. If you let the blood pressure stay down too long, particularly in an elderly patient, you may get cerebral, coronary or renal consequences through his hypotension.

A common error I have seen is that people use a vasoconstrictor, drive the blood pressure up, keep pouring more blood into the patient, keep his blood pressure up with a vasoconstrictor, and thus enhance and support the intra-abdominal bleeding.

The point I want to emphasize is that if you give a patient an adequate volume of blood rapidly, he should respond. If he doesn't, think of intra-abdominal bleeding which must be corrected surgically. If you are going to use vasoconstrictors to avoid renal and cerebral complications, be certain that you don't continue to pour blood into one vessel only to lose it out of another by keeping his blood pressure elevated. I have seen this happen on too many occasions. I have seen it happen on individuals who have had splenectomies. The pressure is down, and vasoconstrictors are given while the patient is actually producing a large abdominal hemorrhage from small bleeders in the retroperitoneal area. This is a very dangerous thing. You should be aware of it and avoid it.

effect on respiration

Now the next point I should like to emphasize is the peculiar relationship between abdominal injury and respiratory distress. People who have major intra-abdominal injuries very often have secondary difficulties with erosion and fraying of the tracheobronchial tree. There may be need for tracheotomy and positive pressure, controlled respiration in abdominal injuries as well as in thoracic injuries. Cause of death of patients with peritonitis was studied recently at the Massachusetts General Hospital. Mortality rate from severe peritonitis in the late stages, that is from three to five days, was markedly reduced in a group of patients in which we did tracheotomies and followed with positive pressures, controlled respiration. The cause of death in severe abdominal injuries and in peritonitis is frequently one or more of the secondary respiratory complications that go along with these abdominal problems.

knife wounds

There are a few ideas that may be helpful in handling specific injuries within the abdomen. One problem is what to do with the individual who has a knife wound in the abdomen and you are not sure whether it penetrates or does not penetrate. In our area of the country this is getting to be extremely common. Our general rule is that anyone who has a stab wound in the abdomen should have an emergency laparotomy and complete exposure of all abdominal contents to be sure about visceral perforation. We find a number of knife wounds that do not penetrate the peritoneum. Nevertheless, the policy I have expressed is completely safe and reliable, and one that should be carried out when confronted with a knife wound of the abdomen.

Recently we have been taking a little bit more conservative attitude and I believe it is equally wise. In those wounds in which there are no signs of peritoneal irritation, and we really do not suspect abdominal penetration, we take the patient to the operating room, or to the emergency room, and under local anesthesia, open the wound and explore it. If we can demonstrate that there has been no perforation of the peritoneal cavity, we are content to watch the individual carefully and repeatedly for the next several hours. If he is well and shows no signs of peritoneal irritation, we do not proceed with an emergecy laparotomy.

This is not just putting a clamp in a wound and moving it around, trying to find a hole in the peritoneum. This is an actual exploration of the wound. If the wound truly does not extend into the abdominal cavity, we do not do a routine laparotomy.

liver

In general, most wounds of the liver will stop bleeding spontaneously, or they will stop bleeding with pressure, or with packing. Use gelatin foam, oxidized cellulose, or just ordinary dry gauze and keep the wound packed. With pressure on the packing, bleeding from a liver wound will usually stop. It is occasionally possible, and occasionally necessary, to try to stop bleeding from the liver by suturing. There are available now some very long, thin needles with ribbon gut attached. These are the most desirable sutures for controlling hemorrhage from liver.

Leakage of bile will come from injury or cut in the liver more frequently than from damage to the extrahepatic bile ducts. It is usually not so excessive that you can't control it by the ordinary methods of draining the abdominal cavity with general drains or with sub-drains. Resection of liver substance is seldom required. Injury to hepatic arteries severe enough to require ligation is rare. Damage to the portal vein sometimes requires suturing but this is quite infrequent.

We occasionally see injuries to the gall bladder or to the common duct. If the gall bladder itself is injured or if the cystic duct is injured, the best treatment is cholecystectomy. One must be very careful to recognize common duct injury. The best treatment of the common duct, if it is transected, is to suture it over a T tube.

If the common duct cannot be exposed adequately or the repair is too difficult, it is possible to ligate both ends and anastamose the gall bladder to the stomach or duodenum.

stomach

Wounds of the stomach are fairly common and are fairly simple from the standpoint of the management. The stomach heals kindly, it is a large organ with plenty of room to suture and the only general principle is the desirability of a two-layer suture. I usually put in an inner mucosal layer of interrupted catgut and an outer seromuscular layer of interrupted, non-absorbable suture, either silk or cotton. There is only one word of caution here. The area of the stomach commonly missed, from the standpoint of injury, is the posterior wall. Before one can be completely satisfied with the closure of the stomach, it is necessary to make an opening into the lesser sac and get a good look at the back side of the stomach. Once the wound is sutured, some thought of decompression is necessary. If it is a simple stomach wound you can use an indwelling nasogastric tube.

duodenum

The most dangerous and treacherous intra-abdominal injury is that in the duodenum. The part more commonly injured is the second portion. The difficulty here is that the viscus is small and it is largely reptroperitoneal. It is somewhat inaccessible. People have tended to miss injuries here or to suture inadequately. If there is attendant injury to the head of the pancreas, which causes secondary pancreatitis, there is predisposition to leakage of the duodenal suture.

In general, if I have an injury to the second portion of the duodenum, I try to get a two-layer closure, with an inner layer of catgut, and an outer layer of interrupted cotton or silk. I try to close the defect in a transverse direction so that the lumen is preserved. I protect this suture line with a proximal gastrostomy or at least with proximal decompression through some type of stomach tube.

pancreas

Wounds of the pancreas are unfortunately very difficult to manage. They are fortunately uncommon. Unfortunately they carry a fairly high mortality. In general, there isn't much to be done for them except to drain them, unless it's easier to take out a section of the pancreas and just get rid of it, tying off the duct if you happen to see it. The best approach to a wound of the pancreas is to drain it. Unfortunately, many of these wounds of the pancreas do not manifest themselves until later. They present as a pancreatic cyst, as a pancreatic hematoma, or as a pancreatic abscess. A hematoma or an abscess should be drained. The cysts are best treated by internal anastomosis to either the stomach or the jejunum.

spleen

There are two types of injury to the spleen which are equally treacherous. The first type is the acute injury where the spleen is bleeding. This is recognized by the fact that the patient stays in shock, and although he is given blood, his hematocrit drops. There are signs of peritoneal irritation in the left upper quadrant and there is blood in the peritoneal cavity revealed by peritoneal aspirations. Severe injury demands emergency operation and splenectomy. I think everyone has abandoned any hope of trying to sew up holes in the spleen. There are not enough consequences from splenectomy that the treatment should be other than removal of the spleen at the time of the acute injury.

If you incise the peritoneum laterally to the spleen and cut the phrenicolienal ligament, it is generally possible to mobilize the whole spleen quickly and lift it out of the abdominal cavity. You may approach it from the back side and get the splenic artery and splenic vein, with the spleen more or less sitting in the abdominal wound. You can get these vessels easily under direct vision without injurying the pancreas. One of the real hazards in doing an emergency splenectomy is that occasionally the pancreas is injured. In the event you can't do that, or you are worried about it, or there is a big hematoma there that makes you feel that you best not fool around in that area, it is possible to get the splenic artery by opening the lesser sac and picking up the splenic artery on top of the pancreas.

I should like to emphasize the so-called delayed rupture of the spleen. Many individuals who have abdominal trauma are perfectly well for a period of three or four days and then they begin to get some vague pains in the left upper quadrant. They really are not bad. The doctor isn't impressed by them, he doesn't follow the blood count carefully and then, suddenly, the patient goes into shock and dies. The incidence of death in this condition is still around 30 per cent. It is a perfectly curable lesion if you are aware of it and take care of it. What happens is that oftentimes in non-penetrating abdominal trauma, there is moderate injury to the spleen. There is a little tear in the capsule or in the subcapsular region. This is followed by slow subcapsular hemorrhage. Suddenly this exceeds a certain total pressure and the spleen ruptures. Bleeding is brisk and the patient dies. The important point here is to be aware of this condition, to recognize it and think about it and to take the spleen out prior to rupture.

No individual with abdominal trauma is free from difficulty for at least three weeks following the trauma and rupture of the spleen is one problem that we have to think about very carefully if we are going to save the lives of thousands.

colon

The large bowel is a particulary important area. The difficulty, of course, is that we have overwhelming infection playing a role as soon as injury occurs. Difficulties are compounded by the fact that trauma and infection leave tissues that do not hold sutures well. The incidence of secondary peritonitis due to tears, holes, and perforations in the large bowel is very high. This means then that, as far as colon injury is concerned, it is necessary to exteriorize the lesion. In large bowel injury combined with vessel injury, it is best to repair the vessel injuries and to exteriorize the large bowel lesions. In injury to the cecum, resection of the cecum with primary anastamosis would be the treatment of choice. In the transverse colon exteriorization is preferable. Injured portions of the left colon should be exteriorized if possible. If this cannot be done, the wound should be repaired and the fecal stream diverted by proximal colostomy. A proximal colostomy is preferably done close to the lesion, that is, on the left side a left transverse colostomy should be done. The closer to the lesion we are, the better off we are. If the bowel is exteriorized, the colostomy should be at the lesion. The simplest method is to put a tube under the bowel, bring it up on the abdominal wall and open it longitudinally. Some lesions of the sigmoid need not be sutured if exteriorized.

rectum

In the rectum there will be either intraperitoneal wounds which should be sutured or wounds in the extraperitoneal area that must be approached through the perineum. A proximal colostomy should be created after suture of peritoneal wounds of the rectum.

kidneys

Most wounds of the kidneys will heal well without any surgical treatment at all. The important point is to ascertain if the kidney is actually wounded. The intravenous pylogram is the best diagnostic aid in this diagnosis. If operation discloses a massive hematoma, one should try to save the kidney. Drainage of a hematoma may even drain urine from the kidney pelvis, but in general one tries to preserve the kidney. The object of doing the pylogram is to be assured that the other kidney is present. There is an occasional unilateral kidney injury and we can't take it out without knowing the other kidney is there.

Most wounds in the ureter are sutered over a splint. A ureteral catheter is inserted into the lumen and taken out through the bladder with a cystoscope. Whether a ureteral catheter later is used for a splint doesn't make any difference, but the idea of sutering the ureter over a splint seems to be the preferable treatment. With bladder injury, it is necessary to sew up the hole and then drain it with a cystostomy. With urethral injury, the method is to get a catheter through and repair the rent in the urethra.

antibiotics

Before I leave this subject there are two or three other things that I want to discuss concerning the overall management of these individuals with major abdominal injuries. First is the use of neomycin at the time of surgery. We said the mortality rate of large bowel injuries is particularly high because of the attendant infections. We have available now an agent which has been used for a long time in preoperative preparation of civilian patients. It has definite application at the time of surgery in major intra-abdominal injuries.

There are several ways to prepare the bowel. It is possible to take a one per cent solution of neomycin and just inject it into the bowel and let it sit there for twenty minutes. It will kill practically all the bacteria in that segment. In an injury to the large bowel, the best strength is a four per cent solution. It may be used to saturate sponges. Neomycin solution will be applied to all tissues touched with the sponges in course of operation. It may also be used to irrigate the peritoneal cavity.

There are reports in the literature that the patient gets respiratory paralysis from the use of intraperitoneal neomycin. I have used it myself without any difficulty. There is an occasional patient, a very occasional one, who might have to have respiratory support for an extra half hour. I have personally not been in difficulty with it. I think it is well worth telling the anesthesist this point if he raises it and they will raise it. I think that you will have to convince him that he too is a doctor and has some of the responsibility of the patient's care and will have to take certain risks along with it in trying to do the maximum for this particular injury.

I have been using a gastrostomy extensively in ordinary civilian surgery on the large bowel. This has real merit to it. In general it frees the individual from much postoperative respiratory distress, particularly in the elderly patients who would otherwise need a nasogastric tube for two or three days. There is considerable mucous secretion from the pulmonary tree that the elderly patient doesn't handle well. I think the gastrostomy tube is a real asset. I use an ordinary Foley catheter, inserted into the stomach very high on the greater curvature. ■

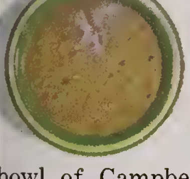
Presbyterian Medical Center (15)

EARLY SPEED LIMITS

In the early days of the automobile, efforts at official control reflected, in part, the basic public hostility to that chuffing, back-firing monster that scared horses, stirred up clouds of dust, and proceeded at unnatural speeds. The very low speed limits set by most jurisdiction were partially justified by the poor handling characteristics and stopping ability of early automobiles and by the miserable condition of most roads—but not entirely. Many towns attempted to bring motor vehicle traffic to a virtual standstill by posting speed limits of 5, 7, and 10 m.p.h. As late as 1923, the state of Illinois had a speed limit of 10 m.p.h. for the business districts of all cities and towns. Most states restricted speeds in the open country to 30 or 35 m.p.h. As late as 1941, Missouri had a rural prima facie speed limit of 25. These early attitudes have never been completely eradicated and undoubtedly account for much of the unrealistic speed control legislation and regulations today.

From "Let's Be Realistic About Speed Limits" by Edwin L. Kirby, in Traffic Safety, June, 1963.

How many make a bowl of soup, Doctor?



Naturally, the number of beans, peas or lentils that go into a bowl of Campbell's soup will depend on the variety of soup and on what our experience and our chefs tell us should be in the soup. But you can be sure of one thing: every bowl of Campbell's soup made with the legumes you see in our picture, will be nutritious and of course delicious.

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But when you plan diets for patients, don't take time to count the beans. Instead, you can count the calories or grams of protein in these soups. You'll see at once that several of our soups would be very desirable to use if you have a patient who needs to put on weight. Bean with Bacon Soup, for instance, contains about 133 calories and 6.8 grams of protein in a 7 oz. serving; and Chili Beef Soup, about 131 calories and 6.2 grams of protein.

At the other end of the scale, many of Campbell's Soups are good to use if you want to give a patient something satisfying but with fewer calories. Vegetable Bean has about 82 calories and 4.4 grams of protein; Minestrone only 83 calories and about 4.9 grams of protein per 7 oz. serving.

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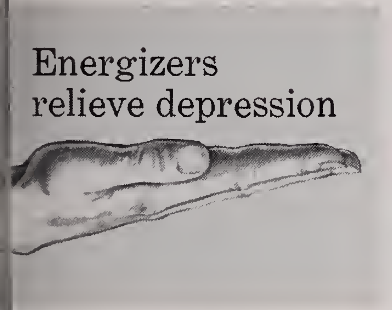
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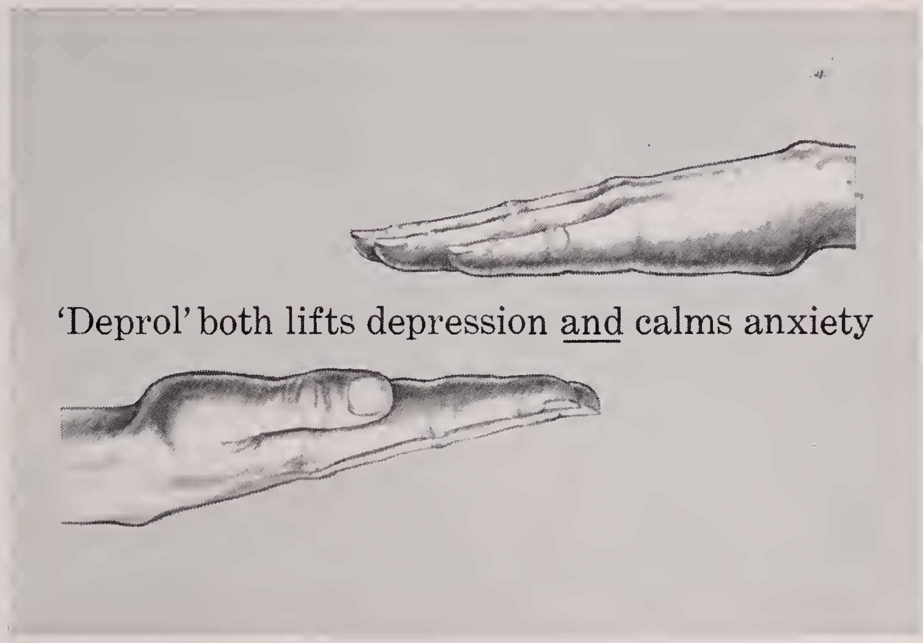
reduce anxiety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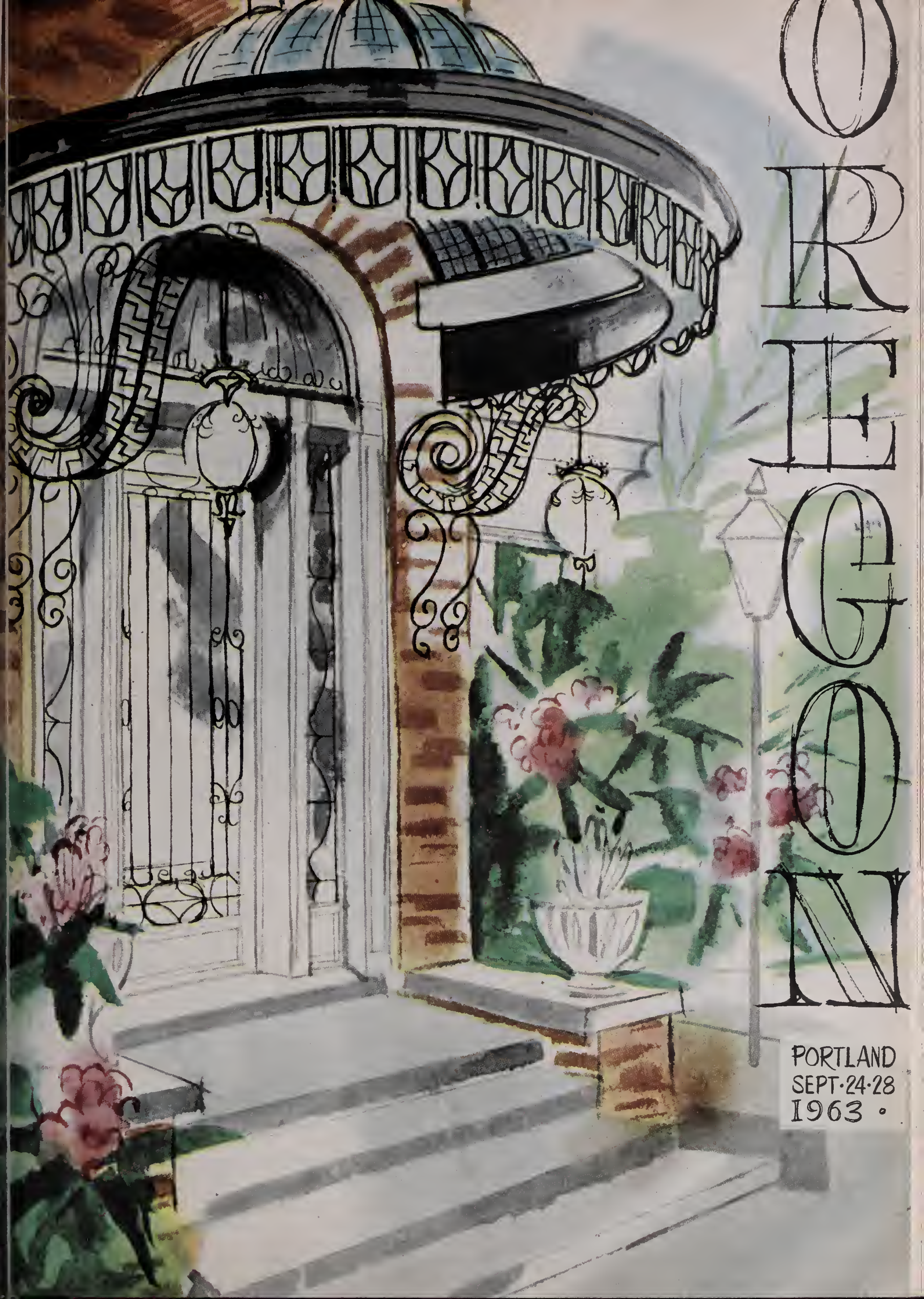

OREGON

PORTLAND
SEPT·24·28
1963 ·

Melvin W. Breese M.D.
President, Oregon State Medical Society

Portland Memorial Coliseum

Combined Annual Meetings
Oregon State Medical Society
and
Oregon Academy of General Practice
in conjunction with
The 37th Sommer Memorial Lecture Series

Memorial Coliseum, Portland, September 24-28, 1963

Program

Tuesday, September 24

6:00 P.M. House of Delegates

Dinner Meeting — U. S. Plywood Room

Wednesday, September 25

7:00 A.M. House of Delegates

Breakfast Meeting — U. S. Plywood Room

Morning Session — Georgia Pacific Room

10:00 Sommer Memorial Lecture — The Problem of the Peptic Ulcer
Sir Arthur Porritt, London

11:00 Progress in the Management of Massive Upper Gastrointestinal Hemorrhage
J. Englebert Dunphy, M.D.
James H. Foster, M.D., Portland

11:30 Gastric Freezing in Dogs
John A. Benson, Jr., M.D., Stanley W. Jacob, M.D., Clifford S. Melnyk, M.D., Portland

12:00 Congress of Delegates — Oregon Academy of General Practice — Luncheon Meeting — U.S. Plywood Room

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DELEGATES

Friday, September 27

7:00 A.M. House of Delegates

Breakfast Meeting — U. S. Plywood Room
8:45 Registration — Foyer - Exhibit Hall

Morning Session — Georgia Pacific Room

9:30 Sommer Memorial Lecture—The Indications for Operative Treatment of Fractures
Preston A. Wade, M.D., New York City
10:30 Recess to visit Technical, Scientific and Art Exhibits
11:00 Sommer Memorial Lecture—New Views on Treatment of Carcinoma of the Breast
Sir Arthur Porritt, London

12:00 Noon. Congress of Delegates
Oregon Academy of General Practice
Luncheon Meeting — U. S. Plywood Room

Afternoon Session — Georgia Pacific Room

Section on Psychiatry

1:30 The Family as the Unit of Psychiatric Study and Treatment
Introduction—Edward E. Rosenbaum, M.D., Portland
Interview with a Family—George Saslow, M.D., Portland
General Discussion—Dr. Rosenbaum, Dr. Saslow
3:00 Recess to visit Technical, Scientific and Art Exhibits
3:30 A Way of Looking at the Problems of Adolescents
George Saslow, M.D., Portland
4:15 General Discussion

Saturday, September 28

7:30 Oregon Medical Golf Tournament
Royal Oaks Country Club, Vancouver, Washington

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VICE PRESIDENT
CHAIRMAN, PROGRAM COMMITTEE

G. ALAN FISHER, M.D.
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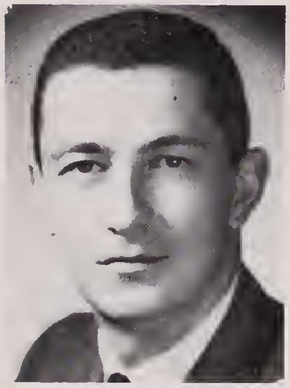
COMMITTEE



ROBERT O. VOY
PRESIDENT, STUDENT AMERICAN
MEDICAL ASSOCIATION

ERNEST P. GREENWOOD, M.D.
PRESIDENT, OREGON ACADEMY
OF GENERAL PRACTICE

Afternoon Session — Georgia Pacific Room

1:30 Surgical Correction of Multiple Valvular Disease
Albert Staar, M.D., Colin W. McCord, M.D., Portland
2:00 Sommer Memorial Lecture — Old and Nonofficial Remedies
Francis C. Wood, M.D., Philadelphia
3:00 Recess to visit Technical, Scientific and Art Exhibits
3:30 Intermittent Hemodialysis in Chronic Uremia:
Experience with a Single Patient in Private Hospital
Otto C. Page, M.D., Richard Drake, M.D., Portland
4:00 Sommer Memorial Lecture—Auto Crash Injury Research and Treatment
Preston A. Wade, M.D., New York City
5:15 Social Hour Honoring Exhibitors—U. S. Plywood Room

Thursday, September 26

8:30 Registration—Foyer - Exhibit Hall

Morning General Section — Georgia Pacific Room

9:00 Sommer Memorial Lecture—The Heart in Surgical Patients
Francis G. Wood, M.D., Philadelphia
10:00 Recess to visit Technical, Scientific and Art Exhibits

Morning Section on Surgery — Georgia Pacific Room

10:30 Sommer Memorial Lecture — The Medullary Rods in Fracture Treatment
Preston A. Wade, M.D., New York City
11:00 The Effect of Closure Techniques on Abdominal Disruption
Gene T. McCallum, M.D., Corvallis

Morning Section on Internal Medicine — U. S. Plywood Room

10:30 Intravenous CO_2 Angio-Cardiography:
A Safe and Useful Method in Diagnosis of Pericardial Disease
Norman L. Bline, M.D., Edward C. Eberdt, M.D., Portland
11:00 The Steak-House Syndrome
George B. Long, M.D., Portland
11:30 Newer Methods in the Diagnosis of Rheumatoid Disease
Daniel M. Bachman, M.D., Portland

Afternoon Section on Internal Medicine — U. S. Plywood Room

1:30 Sommer Memorial Lecture — Practical Points in Diagnosis and Treatment of Cardiovascular Disease
Francis Wood, M.D., Philadelphia

PRESTON A. WADE, M.D.
SOMMER MEMORIAL LECTURER

SIR ARTHUR PORRITT
SOMMER MEMORIAL LECTURER

FRANCIS CLARK WOOD, M.D.
SOMMER MEMORIAL LECTURER

FOLD

2:30 Radioelectrocardiographic Changes During Acute Stress in Health and in Coronary Heart Disease
Robert H. Gustafson, M.D.,
Herbert J. Semler, M.D., Portland
3:00 Recess to visit Technical, Scientific and Art Exhibits

Afternoon Section on Surgery — Georgia Pacific Room

1:30 Symposium on Shock
The Effect of Hemorrhagic Shock on the Nervous System
Clare G. Peterson, M.D., Frederick P. Haugen, M.D., Portland

The Liver and Portal Circulation in Shock
R. Mark Vetto, M.D., Portland

The Importance of Sludging and Blood Viscosity
Roy L. Swank, M.D., Portland
3:00 Recess to visit Technical, Scientific and Art Exhibits
3:30 Sommer Memorial Lecture — Gallstone Complications
Sir Arthur Porritt, London
4:30-5:00 General Discussion

Section on Cutaneous Medicine

3:30 The Gross and Microscopic Diagnosis of Skin Lesion of Lupus Erythematosus
Richard L. Dobson, M.D., Portland
3:45 The Etiologic Significance of Nail Diseases
Leon F. Ray, M.D., Portland
4:00 Panel Discussion—Pictorial Slide Quiz on the Diagnosis and Treatment of Inflammatory Skin Disease
Leon F. Ray, M.D., Sheldon A. Walker, M.D.,
Richard L. Dobson, M.D., Portland
Thomas S. Saunders, M.D., Portland, Moderator

Annual Banquet and Inaugural Ball

6:00 Social Hour — Crystal Room, Hotel Benson
7:00 Banquet and Dance — Mayfair Room, Hotel Benson

Twenty-six licensed by Board of Medical Examiners

Following a special meeting of the Board of Medical Examiners of the State of Oregon, Friday, July 26, Mr. Howard I. Bobbitt, Executive Secretary, announced that the following physicians and surgeons successfully passed the Oregon State Board Written Examination given on July 9 and 10, and are issued licenses:

Sabin Belknap; James C. Dinneen; Riccardo R. Foggia; Frank Fric; Thomas W. Mann; Marilyn Mickey; James R. Orendurff; George Nicholas Pasto; Allan G. Roberts; John P. Rundle; Walter R. Schreck; Laddie E. Stover; David A. Weeks; and Eldon W. Younger, all of Portland.

Larry Bassinger, Albany; David G. Bragg, Tenafly, New Jersey; Gene Gordon Essert, Salem; Arthur R. Fry, Jr., Fort Duchesne, Utah; Lt. Thomas A. Gail, MC, USN, San Francisco; Edwin C. James, White Sands Military Reservation, New Mexico; Gary C. Jenkins, Milton-Freewater; Robert G. Kaufman, Forest Grove; William J. M. Mackenzie, Lake Oswego; Willis E. Peacock, Salt Lake City, Utah; Michael J. Skala, Mather Air Force Base, California; Fredric J. VanRheenen, Washington, D.C.

Physicians and surgeons licensed by reciprocity or endorsement are: William Plummer Coburn, Russell Cole Henry, Gordon Berkeley Leitch, Jr., Oliver Norfleet Massengale, Daniel Lawrence Reed, and Lauren Keith Stanley, all of Portland.

Sam Assam, San Diego; Donald Robert Bartell, Albany; Wilbur George Bingham, Jr., Medford; Sidney Brownstone, Salem; Donald Duane Campbell, Beaverton; William Dennis Conway, Eugene; Jerome Howard Dayton, Eugene; Robert Preston Doughton, Fort Lawton, Washington; Ernest Rickards Duvall, Chico, California; Bonnar Wood Dysart, Tacoma; Virgil Fox Fairbanks, Duarte, California; James Karadine Gray, Roseburg; Donald Leroy Grieme, St. Louis, Missouri; Lumier Erving Hanzel, Salem; Henry Hirschman, Roseburg; Kit George Johnson, Klamath Falls, Lawrence Stewart Krotzer, Orangevale, California; Robert Lynn Lewis, Reedsport; James Theodore Post, Staten Island, New York; Julian Stephen Reinschmidt, Eugene; John Albert Retzlaff, Jamestown, North Dakota; Flemming Fuller Royal, Corvallis; Stanley Anthony Serbousek, Fort Lewis, Washington; Ross Leland Snyder, Jr., Seattle; James Harold Van Olst, Corvallis; Sheldon Leon Wagner, Corvallis; Robert Wayne Wilken, Rochester, Minnesota.

Osteopathic physicians and surgeons licensed by reciprocity or endorsement are:

Richard Walter Clarke, Canby; Bruce Melvin Flaming, Dallas; Sherrill Hudson Frye, Kansas City, Missouri; Daniel Leong, El Paso, Texas; Darrell Leonard Reiber, Shady Cove, Oregon; Duane Allen Thompson, Hillsboro, and Dwight Wesley Williamson, Sunnyside, Washington.

The next regular meeting of the board of medical examiners will be October 3, 4, and 5.

OBITUARIES

DR. JACK HARTMAN *died June 27 at the age of 55 in Sweet Home. His degree was granted by the University of Minnesota Medical School in 1940, and he was licensed in 1947. He had practiced internal medicine in Sweet Home since that time. Death was due to acute myocardial infarction and diabetes.*

DR. WILLIAM TEUTSCH, *a member of the staff at Morningside Hospital in Portland, died May 10. He was 40. Born in Corvallis, he attended the University of Oregon Medical School. He graduated in 1946, received his license in 1947. He specialized in psychiatry.*

DR. WALTER WILLIAM JONES *died July 17 in Jordan Valley, Ore. He had practiced there 43 years. He was graduated from State University of Iowa, College of Medicine, Iowa City, in 1903, was licensed in 1920. Dr. Jones was a medical officer in the Navy during World War I. He was 87.*

DR. ROBERT J. DIXON, *a graduate of Stanford University School of Medicine in the class of 1922, died March 1, at 68, in Coos Bay.*

DR. EMIL BENZ, *64, died May 7 in Portland. He graduated from the University of Oregon Medical School in 1933 and was licensed in 1940. He retired as psychiatrist at Colorado State Hospital. Prior to his assignment there, he had practiced in Seattle, Portland, Phoenix and Mississippi. He was a member of the American Psychiatric Association.*

DR. WILLIS H. WATSON, *resident of Portland, died May 18, at the age of 75. He was a graduate of the University of Illinois College of Medicine in 1913, was licensed in 1919. Born in Latah, Washington, he practiced in Olympia and Oakesdale before moving to Portland in 1919. In 1953, he was named medical director of the Industrial Hospital Association, the position in which he served until his retirement last year.*

DR. ZILPHA GALLOWAY, *85, of Salem, died March 6. She had practiced in the Washington State Hospital at Sedro Woolley before transferring to Fort Steilacoom, where she worked for 25 years prior to her retirement in 1954. Born in Bellevue, she was a graduate of University of Oregon Medical School in 1922. She was licensed in 1924. Dr. Galloway was a member of the American Psychiatric Association.*

DR. CHARLES CREGLOW PETHERAM, *76, died June 29 in Gearhart. A native of Iowa, he had practiced in Portland for 35 years before moving to Gearhart where he practiced 10 years. His degree was granted by the College of Physicians and Surgeons of San Francisco in 1916, and he was licensed in 1917. Dr. Petheram was a first lieutenant in the US Medical Corps during World War I. He had been retired about a year. Death was due to retroperitoneal sarcoma.*

DR. ELEANOR B. GUTMAN, *administrative clinical director at Oregon State Hospital, died March 2, at the age of 58. Born in New York City, she graduated from Yale University School of Medicine in 1930, was licensed in 1946. She was a major in the Army during World War II. Dr. Gutman was recently honored by the naming of the new Eleanor B. Gutman Rehabilitation Center, a Portland institution operated by the Mental Health Association and the Oregon State Division of Vocational Rehabilitation. She specialized in public health and psychiatry.*

DR. CHARLES PALMER MC KIM *died July 19 in Baker. Born in 1909, he was a graduate of the Jefferson Medical College of Philadelphia in 1935 and was licensed in 1937. He was a major in the US Air Corps as flight surgeon in World War II.*

It's The Law, November 15, 1962, a column prepared and distributed by the Washington State Bar Association.

PARENTAL CONSENT TO TREATMENT

It is a good idea to give written consent for necessary medical care for your child if he or she leaves home for a visit or a trip, or if you plan to be away for any length of time.

For example, a school nurse may bring a boy into a hospital with an acute case of appendicitis, but the doctor may well hesitate to go ahead and operate without the parents' consent.

Is the doctor being arbitrary by refusing to operate without consent from the parents? The answer is, he is not. A consent in such circumstances is not just a "legal technicality" that can be easily dispensed with.

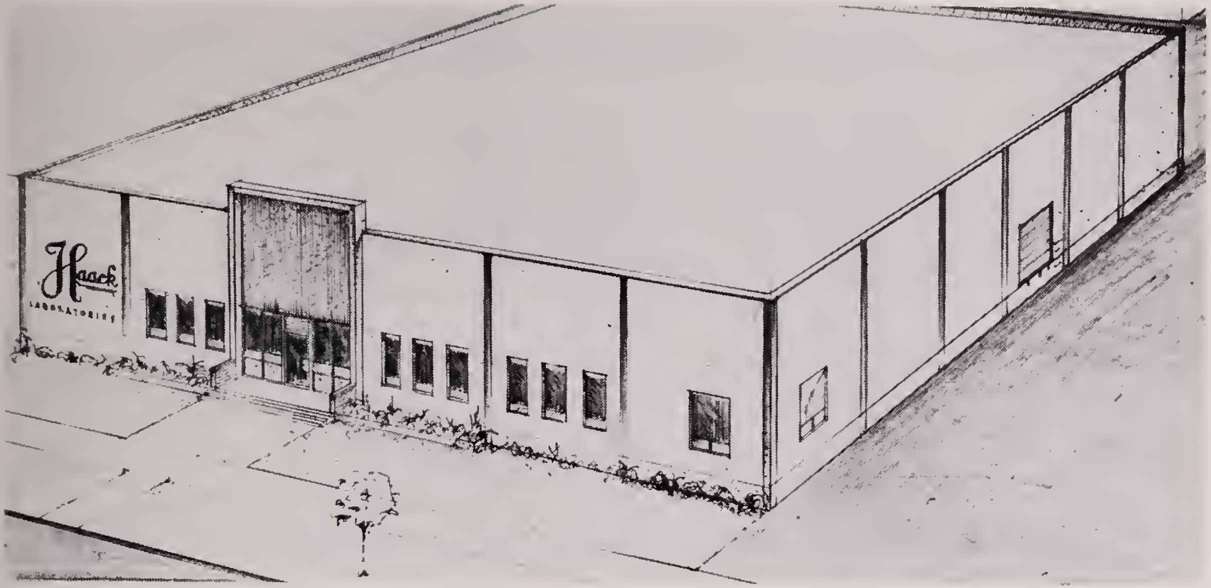
A doctor may give emergency treatment when a child's health or life may be at stake. But he is likely to put off any follow up care until he can get consent from the child's parents.

Even an adult must request treatment and grant consent to medical care before a doctor can give it to him. Children cannot grant consent for themselves.

However, by going to the doctor you show your willingness and consent to being treated by him. If you are taken to a doctor unconscious, however, he may give you emergency treatment, but later refuse to treat you further until you have consented to treatment.

Since children cannot give consent to treatment on themselves, it is necessary for their parents to consent for them. When the children are at home or the parents can be reached in a few minutes time, consent poses no problem. But when parents may be gone, or the child may be away from home and parents for some time, it is a good idea to provide a written consent for treatment they might need in unexpected situations.

(This column is written to inform, not advise. Facts may change the application of law.)



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And even these were the fortunate ones, despite the fact that they were to carry a disfigurement for life. Many died. Particularly if meningitis had set in before surgery . . .

You see very few mastoid scars around today – and, under 20 years of age, they are almost nonexistent.

But, not so many years ago (1934) it was a different story:

*"No case of acute mastoiditis should be accepted for insurance unless the ear has healed up after operation and has remained so for at least six months."**

From insurance risk to a practically unknown entity in medicine is quite a record for the relatively few intervening years between then and now. The reasons are not hard to come by. Diagnostic techniques have improved enormously, as has the quality of medical education. And, we submit, so has the quali of the medicines which have become available.

Yet, the value of independent drug research has been seriously challenged – research which has produced the chemotherapeutic compounds which make the *cure* of mastoiditis practically a routine, not even a worrisome, procedure. True, the cost may run as high as $15.00. Yet, ask the man who paid $1,000.00 for his mastoid scar which he would have preferred – if he had had the choice.

*Asherson, N., "Acute Otitis and Mastoiditis in General Practice," H. K. Lewis & Co., Ltd., London, 1934.

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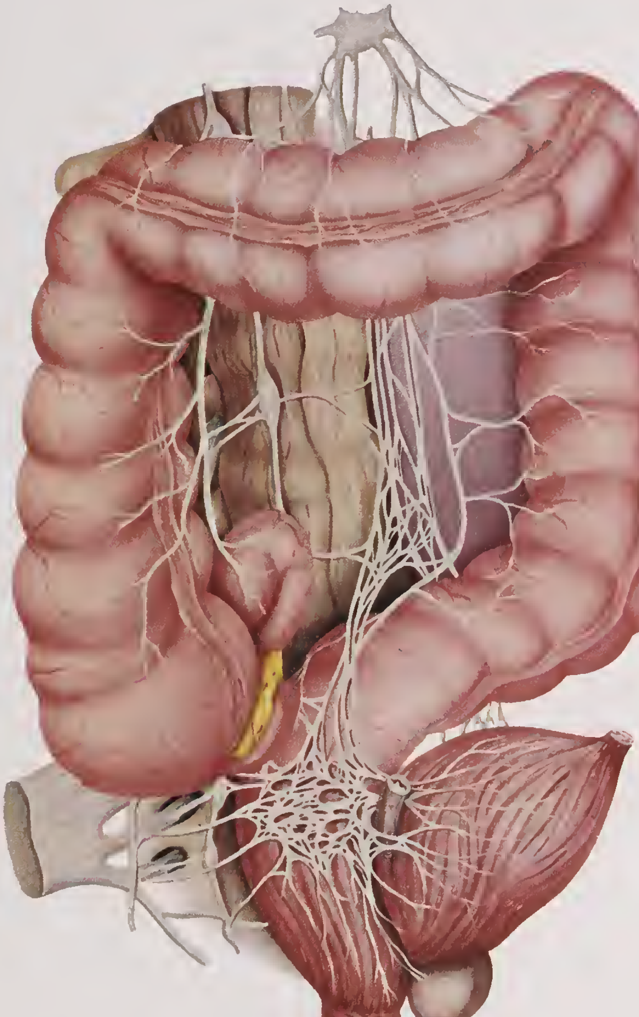

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DEAN K. CRYSTAL, M.D.
President - Washington State Medical Association

Members of the Washington State Medical Association: One of the real pleasures accorded to a president of the Washington State Medical Association is to announce the annual meeting and to urge each and every member to come and participate.

This year's format is one in which the committees in charge have attempted to emphasize practical clinical discussions and at the same time to bring out the scientific developments which have occurred within Washington State in the recent past. Every effort has been made to preserve the best features of previous programs and to innovate only to the extent of capitalizing on the lessons which have been learned before.

There are some changes that we hope will be approved by the members. Budgetary considerations have compelled us to eliminate some of the pleasant accessory functions that usually attend the annual meeting. Their elimination has not in any way diminished the quality of our scientific endeavor.

The annual meeting, of course, also is the time when every doctor in the State of Washington has access to the ears and to the minds of all the other doctors in the State. This is the time when he who feels that he would like to speak out on matters of importance to all of us can do just that. Reference committees of The House of Delegates may be addressed by any member and all members are invited to audit all sessions of the House.

Please plan to come to the meeting which will be held in Seattle September 15 through the 18. We feel certain all of our member physicians and their families will find the whole experience enjoyable.

Sincerely yours,

Dean K. Crystal, M.D.

EDWARD ANNIS, M.D.
President - American Medical Association

Edward R. Annis, Miami, Florida, was installed as President of the American Medical Association at the Annual Meeting at Atlantic City in June, 1963.

Dr. Annis, who is a surgeon, served as chairman of the AMA's National Speakers Bureau for a year prior to his election. He has won prominence as a speaker and debater, appearing on nationally televised programs such as "Your Doctor Reports," the AMA's nationally televised program on May 21, 1962.

He was born in Detroit, March 27, 1913. He was graduated from the University of Detroit with a BS degree in 1933. Five years later he earned his MD degree from Marquette University School of Medicine and began his medical practice in Tallahassee, Florida. In 1948 he moved to Miami where for 10 years he was chief of the Department of General Surgery at Mercy Hospital.

For several years he has served as a director of the family service and senior citizens division of the Welfare Planning Council of Miami. He is chairman of the Florida State Medical Association's Legislative Committee and an active member of Kiwanis and the Dade County Chamber of Commerce, serving on the latter's political action committee.

In 1958 Dr. Annis was awarded the Brotherhood Medal of the National Conference of Christians and Jews. In 1961 the Florida State Medical Association gave him the first annual J. H. Robins Company award for "Outstanding Community Service by a Physician."

Dr. Annis is married to the former Betty McCue Starck. They have eight children, four boys and four girls, ranging in age from 4 to 20 years.

JOHN L. BAKKE, M.D.

The WSMA over the past three to four years has received many compliments on the high caliber of its scientific program, presented during the Annual Meeting. Your Scientific Program Committee has endeavored to maintain this high quality, but also has planned an experiment in an effort to eliminate the conflict of having too many good papers presented at the same time on various competing programs. To accomplish this, you will see we have markedly reduced the number of simultaneous sessions.

We have introduced the Conjoint Session, hoping this would have broad appeal. Combining several specialties and utilizing both prominent guest and local speakers, only two competing sessions have been scheduled for each morning of the three day scientific program. Each session will devote the entire period to exploring a single topic and plans to provoke panel discussion and participation from the audience.

The more usual specialty sessions in Internal Medicine, Pediatrics, Psychiatry, Surgery, Ob-Gyn and E.N.T. will be held Monday afternoon and in some instances go over into a second afternoon. The opthalmologists have retained their usual morning meetings, however. These sessions will attempt to present brief reports on new research, directed to the specialty audience.

A "General Medical-Surgical Review of What's New" will fill the program on Tuesday and Wednesday afternoons. These sessions are to be of general and practical interest, and will include critical reviews as well as new findings, and will feature several of the eminent guest speakers.

The only presentations competing with these sessions will be medical television on Tuesday and noteworthy medical movies on Wednesday. We hope this experiment in programming meets with the members' approval.

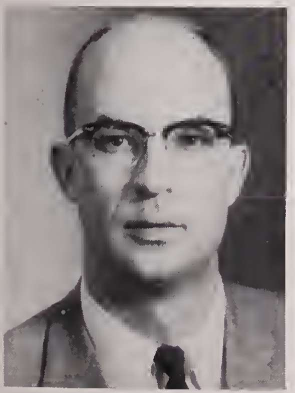
John L. Bakke, M.D., Chairman
Scientific Program Committee

R. B. GREENBLAT, M.D.

BRUCE D. GRAHAM, M.D.

R. W. WEILERSTEIN, M.D.

THOMAS DETRE, M.D.


W. ANDREW DALE, M.D.

VERNON KNIGHT, M.D.

DONALD B. LUCAS, M.D.

STANLEY O. HOERR, M.D.

R. W. HOLLENHORST, M.D.

JOEL J. PRESSMAN, M.D.

ARTHUR J. SEAMAN, M.D.

MARVIN SLEISENGER, M.D.

MONDAY **September 16** SECTIONS	9-10	10-11	11-12
Conjoint Session PEPTIC ULCERATIVE DISEASE (Spanish Ballroom)	9:00 SLEISENGER 9:15 HOERR 9:30 GRIFFITH 9:45 SAVAGE	10:00 Recess—Visit Exhibits 10:15 Panel on Case Histories	—continued
Conjoint Session DEVELOPMENTAL DEFECTS AND TERATOGENIC DRUGS (Olympic Bowl)	SHEPARD WEILERSTEIN	Topics: Problems of Drug Testing on the Pregnant Woman; What Drugs the Pregnant Woman Should Not Take; Relationship of Hereditary to Congenital Defects; Late Detection of Congenital Anomalies	
EYE (Rex Room)	9:00 An Unusual Ocular Complication in Carotid Cavernous Sinus Fistula, McINTYRE 9:20 Discussion 9:30 Practical Observations on Contact Lens Management, CAREY 9:50 Discussion	10:00 Recess—Visit Exhibits 10:20 Cerebrovascular Occlusive Arterial Disease—Ophthalmic Aspects, HOLLENHORST	11:20 Discussion 11:30 Toxoplasmic Chorioretinitis—Current Status in Diagnosis and Management, PASSMORE 11:50 Discussion

	1-2	2-3	3-4	4-5
E.N.T. (Empire Room)		2:00 Direct Communications Between Cervical Lymphnodes and Veins, PRESSMAN 2:40 The Cervical Fascial Spaces, BASSETT	3:20 Recess—Visit Exhibits 3:35 Hybaroxic Radiation Therapy of Head and Neck Cancer, WILDERMUTH	4:15 Removal and Primary Repair of Superficial Tumors of the Face, PRESSMAN
INTERNAL MEDICINE (Spanish Ballroom)	1:30 Possible New Screening Sign for the Detection of Diabetes, POTTS 1:40 Discussion 1:45 Arguments for Endocrine Intervention in the Menopause, BAKKE 1:55 Discussion	2:00 Experience with the Spokane Artificial Kidney Center to Treat Acute and Chronic Renal Failure, MARR 2:10 Discussion 2:15 Evaluation of Patients with Angina and Selection for Coronary Cine Angiography, MICHEL 2:25 A Clinical Evaluation of Direct Coronary Artery Catheterization and Arteriography, LOGAN 2:35 Discussion 2:40 Recess—Visit Exhibits	3:00 Protein-Losing Enteropathies, SLEISENGER 3:10 Discussion 3:15 The Value of Peritoneoscopy to Clinical Medicine, BOYCE 3:25 Discussion 3:30 Qualitative Serum Bilirubin Screening Test, GIBB 3:40 Discussion 3:45 Automobile Injuries—A National Epidemic, FISHER 3:55 Discussion	4:00 Recess—Visit Exhibits 4:15 Two Causes of Chest Pain Produced by Seldom Recognized but Easily Treatable Musculoskeletal Complaints, COOPER 4:25 Discussion 4:30 The Role of Selective Catheter Angiography, MARTIN 4:40 Discussion 4:45 New Simple Tools for Doing the Impossible in Skin Treatment, EXNER 4:55 Discussion
OB-GYN (Queen's Room)	1:30 Pretreatment X-Ray Evaluation of Cervical Carcinoma, PARKER	2:00 Carcinoma in Situ: Clinical Management and Results, DeALVEREZ 2:30 Cytological Survey: Carcinoma of Cervix, FIGGE	3:00 Recess—Visit Exhibits 3:15 Hyperthecosis of the Ovary SPADONI & HERRMANN 3:45 Physiologic Implications of Vaginal Cytology, WALKER	4:15 Panel: Infertility—RUTHERFORD & FORD & RICE & BUCKNER & QUINT
PEDIATRICS (Williamsburg Room)	1:30 The Pediatrician and Breech Delivery, MORTON 1:45 The Forgotten Testis, BAXTER	2:00 Neonatal Thyrotoxicosis, MAHONEY 2:15 Early Detection of Congenital Anomalies, GRAHAM 2:45 Recess—Visit Exhibits	3:00 Repetitive Poisoning in Childhood, SOBEL & MARGOLIS 3:15 Isolated Ventricular Septal Defects in Pediatrics, DEANE 3:30 Role of Cineangiocardiography in Congenital Heart Defects, TANBARA 3:45 Angiocardiographic Demonstrations of Collateral Circulation to the Lung, GUNTHEROTH	4:00 Diagnosis and Treatment of Hypoglycemia in the Pediatric Age Range, LIMBECK

PSYCHIATRY (Colonial Room)	1:30 The Geriatric Mentally Ill: Problems and Programs, LARSON 1:50 Discussion	2:00 Study of Peptic Ulcer Patients Before and After Gastrectomy, Van STUBBE & JOHNSON & ELY 2:20 Discussion 2:30 Death Associated with Anti-Depressant Drug Administration, JOHNSON 2:45 Discussion 2:50 Psycho-Social Changes Associated with Aging, SYTMAN & LAMEY & WINEMILLER & PRESTON	3:10 Discussion 3:20 Psychologic Factors in Oral Contraception, BAKKER & DIGHTMAN 3:50 Discussion	
SURGERY (Rex Room)	1:30 Arterial Reconstruction Using Autogenous Tissues: Repair with Autogenous Vein Graft and Thromboendarterectomy, DALE	2:20 Use of Venous Autografts for Femoro-Popliteal Reconstruction: Indications, Technique and Results, SAUVAGE 2:35 Hyberoxic Therapy in the Management of Acute Arterial Occlusion, COE 2:50 Surgical Removal of Solitary Pulmonary Metastases, SMITH	3:05 Recess—Visit Exhibits 3:15 Delayed Primary Definitive Repair of Soft Tissue and Bone Injuries of the Face, PILLING 3:30 Reduction of Post-Operative Pain, SMITH 3:45 Brain Tumors Presenting as Catastrophy, MALDEN	4:00 A Re-Evaluation of Gastric Surgery with Regard to Post-Operative Nutritional States, WHITE 4:15 Cancer of the Biliary System and Pancreas, HOERR

SOCIAL HOUR WITH EXHIBITORS IN OLYMPIC BOWL, 5:00 P.M. TO 6:30 P.M. DOCTORS URGED TO ATTEND

TUESDAY **September 17** **SECTIONS**	**9-10**	**10-11**	**11-12**
Conjoint Session OCCLUSIVE VASCULAR DISEASE (Spanish Ballroom)	9:00 Introduction 9:05 Eye Manifestations of Occlusive Vascular Disease, HOLLENHORST 9:20 Occlusive Vascular Disease and the Central Nervous System, FOLTZ 9:40 Renal Vascular Disease and Hypertension, ANSELL 9:55 Occlusive Disease of the Aorta and Extremeties, DALE	10:20 Recess—Visit Exhibits 10:35 Venous Occlusive Disease and Pulmonary Embolism, DALE 10:50 Sympathectomy in Peripheral Vascular Disease, STRANDNESS	11:05 Anticoagulants in Occlusive Vascular Disease, SEAMAN 11:20 Panel: Case Presentations ANSELL & DALE & FOLTZ & SEAMAN & STRANDNESS
Conjoint Session REVIEW OF ACUTE VIRAL AND BACTERIAL INFECTIONS WITH EMPHASIS ON PROBLEM CASES (Williamsburg Room)	9:00 Use of Oral Penicillins in Gram Positive and Gram Negative Infections, ALLEN 9:20 Management of Staphylococcal Endocarditis and Staphylococcal Osteomyelitis, PERRY 9:40 Viral Pneumonia—Status of the Eaton Agent, KNIGHT	10:00 Acute Infections Due to Resistant Gram Negative Organisms, PLORDE 10:20 Recess—Visit Exhibits 10:30 A New Asian Influenza Virus in the United States—The Problem and Its Control, KNIGHT	11:00 Case Presentations and Panel Discussion
EYE (Rex Room)	9:00 Pressure Measurements and Suction Cup Tonography, PETERSEN 9:20 Discussion 9:30 LAWRENCE—Subject to be announced 9:50 Discussion	10:00 Recess—Visit Exhibits 10:20 Dacryocystorhinostomy, BEDROSSIAN 10:35 Discussion 10:45 Pathogenesis of the Visual Field Changes in Glaucoma, HOLLENHORST	11:15 Discussion
MEDICAL TELEVISION CASE PRESENTATION AND PANEL DISCUSSION (Olympic Bowl)	9:00 Modern Concepts and Treatment of Rheumatoid Arthritis Panel—WILKENS & SHALIT & STEWART & COOPER	10:00 Cancer and Allied Problems Panel—WILDERMUTH & COE & DONOHUE & PARKER	11:00 Significant Treatment Advances in Fungus Disease & Psoriasis—ODLAND & POMMERENING & SHAW

	1-2	2-3	3-4	4-5
General Medical Surgical Review of What's New (Spanish Ballroom)		2:00 Ulcers of Extremities, DALE 2:20 Discussion 2:25 Anticoagulants, SEAMAN 2:45 Recess—Visit Exhibits	3:00 Mammography, WARD 3:20 Discussion 3:25 Care of the Premature Infant, GRAHAM 3:45 Discussion 3:50 Pancreatitis, HOERR & SLEISENGER	
SURGICAL TELEVISION AND FILM SESSION (Olympic Bowl)	1:00 Carotid Artery Endarterectomy or Aneurysm Resection, HILL & TYTUS	2:30 Femoral-Popliteal Artery By-pass Graft, JONES		4:00 The Technique of Vagotomy and Pyloroplasty (Film) HOERR 4:30 Technique of Billroth I Reconstruction Following Partial Gastrectomy for Large Gastric Ulcer (Film) HOERR
E. N. T. (Rex Room)		2:00 Endoscopy and Television, BERCI 2:40 Temporomandibular Joint Dysfunction, Non-Surgical Therapy, KIDD	3:00 Recess—Visit Exhibits 3:10 Temporomandibular Joint Dysfunction, Surgical Therapy, NOVACK 3:40 Diseases of the Submaxillary Gland, CAHN	4:10 The present Status of Chemotherapy in Pediatric Oncology, BARRONE
INTERNAL MEDICINE (Colonial Room)		2:00 Studies on New Common Cold Etiologic Agents — Rhinoviruses, KNIGHT 2:10 Discussion 2:15 Serratia Infections (Enterobacteria) LANCASTER 2:25 Discussion 2:30 Clinical Aspects of an Epidemic due to Coxsackie B2 Virus, FELSENSTEIN 2:40 Discussion 2:45 Relationship Between Mold Sensitivity and Bronchial Asthma, COLEN 2:55 Discussion	3:00 Cervical Glomectomy for Intractable Asthma, JARVIS 3:10 Discussion 3:15 Recess—Visit Exhibits 3:30 Intrathoracic Pseudotumors, MORGAN 3:40 Discussion 3:45 Radioisotopes in Brain Scanning, LaZERTE 3:55 Discussion	4:00 Hyboraxic Radiation Therapy of Cancer, WILDERMUTH 4:10 Discussion 4:15 Polyarteritis Nodosa, HERRMANN 4:25 Discussion
PEDIATRICS (Queen's Room)		2:00 Ten Year Evaluation of the Complications of Pneumoencephalography at a Children's Hospital, CHAPMAN 2:15 Hydrocephalus, Six Year Evaluation, BROBECK & SHURTLEFF 2:30 Chest Measurements as an Aid in the Diagnosis of Cystic Fibrosis, STAMM 2:45 A Doctor's Approach to Helping the Child Who is Failing in School, LAGOZZINO	3:00 Cytomegalic Inclusion Disease of Infancy in the Seattle Area, EMANUEL	

SPECIALTY SECTION LUNCHEONS AT 12:00 NOON. ANNUAL DINNER DANCE, REFRESHMENTS AT 6:30 P.M. IN OLYMPIC BOWL, DINNER 7:15 P.M. IN SPANISH BALLROOM, DANCE 9:00 P.M. IN OLYMPIC BOWL

WEDNESDAY September 18 SECTIONS	9-10	10-11	11-12
Conjoint Session EMERGENCY MANAGEMENT OF TRAUMA, SURGICAL, PSYCHIATRIC, MEDICO-LEGAL (Olympic Bowl)	9:00 Opening Remarks, ANDERSON 9:05 Craniocerebral and Spinal Cord Injuries, PHILLIPS 9:25 Blood Vessel Injury, LOBB 9:45 Psychiatric Aspects of Trauma, HAMPSON	10:05 Recess—Visit Exhibits 10:15 Certain Orthopedic Aspects of Trauma, LUCAS 10:35 Legal Aspects of Trauma, HORSWILL, L.L.B. 10:55 Panel Discussion, Audience Participation	
Conjoint Session SEX AFTER FIFTY; HORMONES, METABOLISM AND PSYCHE (Spanish Ballroom)	9:00 Introductory Remarks, HERRMANN 9:05 Sexual Problems in the Aging Male, A Urologist's Experience, ANSELL 9:25 Failing Gonadal Function, HELLER 9:45 Steroids, Bones, and Other Tissues, NIELSEN	10:05 Recess—Visit Exhibits 10:15 Endocrinology of Sexual Behavior, GREENBLATT 10:45 Never Too Late, DETRE	11:15 Panel Discussion, Audience Participation
EYE (Rex Room)	9:00 Evaluation of Ocular Signs in Proven Intracranial Aneurysms, HOLLOWAY 9:20 Discussion 9:30 Hereditary Macular Degenerations, GRIMM	10:00 Discussion 10:15 Recess—Visit Exhibits 10:35 Temporal Arteritis, HOLLENHORST	11:20 Discussion 11:30 The Eye and Acromegaly, HUNGERFORD 11:50 Discussion

	1-2	2-3	3-4	4-5
General Medical Surgical Review of What's New (Williamsburg Room)		2:00 Tranquilizers—Use and Abuse, DETRE 2:20 Recess—Visit Exhibits 2:25 The Problem Foot, LUCAS 2:45 Recess—Visit Exhibits	3:00 Enzymes and New Lab Procedures, RICKER 3:20 Recess—Visit Exhibits 3:25 Steroids and Infection, PERRY 3:45 Recess—Visit Exhibits 3:50 Ovulation and Clomiphene (MLR 41), GREENBLATT	4:45 Discussion
SCIENTIFIC FILM SESSION (Colonial Room)	1:30 Heart Sounds and Murmurs, RUSHMER 1:55 Liver Cysts, SOLA	2:15 Hemodialysis in the Treatment of Chronic Uremia, SCRIBNER 2:45 Priceless Gift, Channel 7 Special	3:40 Implantation of a Permanent Pacemaker for Relief of Stokes-Adams Syndrome, LAWRENCE & KING & PAINE	4:00 Carcinoma of the Breast; Mammography and Radical Resection with Electrosurgical Knife, BAKER & CARLILE 4:25 Preperitoneal Herniaplasty in the Treatment of Massive Sliding Hernia, NYHUS 4:50 Surgical Anatomy of the Pulmonary Hilum, Part I, Right Lung, BOYDEN & SMITH 5:20 Surgical Anatomy of the Pulmonary Hilum, Part II, Left Lung, BOYDEN & SMITH

PRESIDENT'S LUNCHEON AT 12:00 NOON IN SPANISH BALLROOM
RECEPTION FOR NEW PRESIDENT AT 7:00 P.M. IN GEORGIAN ROOM

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*Ruggieri, P.A.: J. M. Soc. New Jersey 59:503 (Sept.) 1962.

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SECRETARY	*A. Curtis Jones, M.D., Boise*
EXECUTIVE SECRETARY	*Mr. A. L. Bird, Boise*

annual meeting June 17-20, 1964, Sun Valley

Sun Valley -- 1963

Idaho's well known formula was given a few new ingredients this year and the result was received warmly by everyone except the weather man. For reasons known only to himself, and probably not those concerning the program, he produced a white flurry on the morning of the final day of the session. Upon close examination it was proven to consist of genuine Idaho snow but with a half life fairly well exhausted by the time it reached the ground. The superb meeting was unharmed.

This was the 71st annual session, at Sun Valley, June 26-29. In spite of loss of the last half of the Formula, the meeting surpassed all its predecessors in interest and value. It also broke all records for attendance. One-fourth of those registered were from outside the state.

Those who missed the scientific lectures missed the best postgraduate educational session ever conducted by the Idaho State Medical Association. It was best in quality as well as in quantity. The ses-

The Trail Creek Party was blessed with a warm, sunny evening, excellent food, and delightful friendliness.

sions continued through the afternoon rather than through the forenoon only as in recent years. Ten guest speakers discussed subjects ranging from virus disease, femoral fractures in children and chemotherapy of solid tumors to space medicine and selection of patients for heart surgery. Subjects were well chosen to cover almost every field of medicine and speakers were well chosen to present them. Idaho has followed the practice of re-inviting those who have made outstanding presentations at former meetings. The meeting was enriched this year by several who had been favorably received before.

Norman A. Welch, of Boston, billed as the Speaker of the House of Delegates of the American Medical Association, came as the AMA President-Elect. He had been elected to that office only the week before, at Atlantic City. He had been Speaker since 1959. Dr. Welch discussed many important problems facing the profession. His address will be published in a forthcoming issue of this journal.

Business of the House of Delegates was handled smoothly and efficiently due to well organized efforts of the executive staff and the quiet guidance of President Manley Shaw.

Paul B. Heuston was installed as President and Corwin E. Groom is President-Elect. A. Curtis Jones was re-elected as Secretary-Treasurer. Councilors are John M. Ayers, Moscow; William B. Jewell, Emmett; James R. Kircher, Burley; and O. D. Hoffman, Rexburg. AMA Delegate is Alexander Barclay, Coeur d'Alene, Alternate Delegate is Donald K. Worden, Lewiston, and Trustee to Northwest Medicine is William T. Wood, Coeur d'Alene.

He's photogenic—even going away

Our boys do get around—Did you happen to notice the bicycle rider on Page 62 of the July 19 issue of *Medical World News*, Special A.M.A. Convention Issue? It's none other than Idaho's Delegate, Alexander Barclay, Coeur d'Alene. Donald K. Worden, Alternate Delegate, drew an old bike and was bringing up the rear.

Incoming President, Paul B. Heuston, was given a large economy size identification tag. It carried information presumed to be useful should he repeat the accident giving him a spiral tibial fracture while attending a meeting of Officers and Councilors at Sun Valley in May.

Norman A. Welch, M.D., Boston, President-Elect of the American Medical Association and Mrs. C. Rodney Stoltz, Watertown, South Dakota, President of the Woman's Auxiliary to the American Medical Association.

Rehab director retires

Mr. Milo T. Means, Boise, who has served as Director of Idaho's Vocational Rehabilitation Service for 34 years, has retired and Mr. Lloyd H. Young, Boise, has been named to succeed him.

For many years Mr. Young has been Supervisor of the Disability Determination Section of Vocational Rehabilitation Service. Mr. Means will continue as Case Service Supervisor.

Executive Secretary, Mr. Armand Bird, was the very much surprised recipient of the travelling cuspidor, traditional, playful, but sincere token of esteem.

Resolutions Adopted at Sun Valley

During the 71st annual meeting at Sun Valley, the House of Delegates adopted the following resolutions:

Resolution No. "A"

WHEREAS, the scientific, social and economic problems of the medical professions of the Rocky Mountain States are common to each of these states and should be made the subject of a joint meeting of the medical societies of these states; and

WHEREAS, the Idaho State Medical Association desires to join with the medical societies of Colorado, Montana, Nevada, New Mexico, Utah and Wyoming, in causing the formation and maintenance of the Rocky Mountain Medical Conference; therefore be it

RESOLVED, by the House of Delegates of the Idaho State Medical Association:

1. That the President is hereby instructed to appoint what shall hereafter be a continuing special committee to be known as the Rocky Mountain Medical Conference Committee, to consist of five members serving terms so arranged that the term of one member of the Committee shall expire each year.
2. That the said Committee is hereby authorized to represent the Idaho State Medical Association in all matters pertaining to the planning, conduct, and management of a biennial joint meeting of the medical societies of the Rocky Mountain states, without however, authority to commit funds of the Idaho State Medical Association unless specifically granted appropriations therefore by the Council of this Association;
3. That the guiding principles of the Rocky Mountain Medical Conference as published in its Official Programs for its 1937 and 1939 biennial meetings shall be adhered to by this Association by the said committee and by this Association as a whole whenever a meeting of the said conference shall be conducted under the auspices of this Association, and
4. That participation in the Rocky Mountain Medical Conference shall not be construed to deny attendance upon meetings of the Conference by any doctor not a member of this Association.

(The next meeting of the Rocky Mountain Medical Conference will be held in conjunction with the Nevada State Medical Association's Annual Meeting in Las Vegas, Oct. 31-Nov. 2, 1963.)

Resolution No. "B"

WHEREAS, it has been established scientifically by numerous investigators widely separated and working independently, that a direct relationship exists between the use of cigarettes and the incidence of lung cancer, emphysema, as well as certain types of heart disease, and

WHEREAS, the incidence increase in the above noted diseases is truly alarming, and may well in the period of the next decade take its place as the greatest health hazard facing the American people, statisticians predict an increase of from the present 40 to possibly 80 deaths per hundred thousand population each year from lung cancer alone, and

WHEREAS, only five per cent of lung cancer cases are operable when diagnosed due to its inherent and peculiar habit of early metastasis which may sometimes usher in the symptoms of its presence thus prevention is of utmost importance if a very significant segment of our population is to be spared its ravages, and

WHEREAS, the tobacco industry through the use of an elaborate and expensive advertising program attempts, and too often successfully, to present cigarette smoking to young adults in particular as a sophisticated and adult pattern of behavior, and

WHEREAS, in so doing the dangers of the cigarette habit are not mentioned and in some printed advertising are minimized, rejected or even denied; therefore be it

RESOLVED, that this House of Delegates of the Idaho State Medical Association urge the local medical societies to initiate a program of dissemination of information concerning the harmful effects of tobacco on all body systems in cooperation with existing health organizations.

Resolution No. "C"

WHEREAS, the Idaho State Medical Association has advocated the formation of a physician sponsored prepaid medical service plan for Southern Idaho, and

WHEREAS, the South Idaho Medical Service Bureau, Inc., has been created and is making every effort to establish such a plan, and

WHEREAS, it is the principal of such a plan to provide physicians' services on a fee for service basis, and

WHEREAS, those services provided by pathologists, radiologists, anesthesiologists, cardiologists and physiatrists are medical services and not hospital services and have been clearly so designated by the American Medical Association, and

WHEREAS, in an Idaho Attorney General's opinion of 26 May, 1954, the performance of such medical services by a hospital or other lay body is considered to be illegal under the statutes of the State of Idaho; therefore be it

RESOLVED, that the House of Delegates of the Idaho State Medical Association indicates its agreement with the principal that the services of such physicians are medical services and recommend to the Board of Directors of the South Idaho Medical Service Bureau, Inc., that such services be covered in policies written by this corporation and recommend that the officers and Board of this corporation make every effort to see that such medical services are no longer covered in hospital service policies.

(This resolution will be considered by the Board of Directors of the South Idaho Medical Service Bureau, Inc., at their next meeting.)

Medical aspects of sports

In adopting the Report of the Reference Committee on Miscellaneous Business, the House of Delegates had its attention called to the report of the Association's Medical Aspects of Sports Committee, Dr. John F. Stecher, Caldwell, Chairman.

1. That physical examination cards for high school sports have been changed so that a medical doctor is not required to perform the physical examination of the students.

2. Chiropractors, osteophaths and chiropodists have been acting as "team physicians" in many areas of the state.

3. There has been some difficulty obtaining medical doctors cooperation in high school athletic programs throughout the state.

The final portion of the report of the Reference Committee said:

"Your Committee respectfully recommends that each component medical society form a Sports Committee. That the committee consist of at least one representative physician from each community within the area of the society. That the function of the committee be to formulate a sound medical program within the area and to establish liaison with each school district to help coordinate this program with all athletic departments."

The report of the Reference Committee on Miscellaneous Business, including the above recommendation was unanimously adopted.

Northwest regional meeting, Academy of General Practice

A well balanced program of postgraduate education has been arranged for the scientific session of the Northwest Regional Academies of General Practice. This is a combined meeting of the state general practice groups from Oregon, Washington, Idaho, and Montana. Category 1 credit will be granted to members but all physicians are invited. A fly-in for members of the Flying Physicians Association will be held at the same time.

The meeting will be held September 19-21, in Idaho Falls, at Stardust Motel.

The program follows:

Thursday, September 19

9:15	Reduction Mammaplasty for Pendulous Breasts	*Philip Thorek, M.D.*
10:00	Oral Progestins: Their Actions and Use	*C. Alvin Paulsen, M.D.*
11:00	Recess	
11:15	Epidemic Influenza-Epidemiology, Pathology, Prevention and Treatment	*Clayton G. Loosli, M.D.*
1:30	Recognition and Care of Psychiatric Emergencies	*James S. Cheatham, M.D.*
2:30	Accident Proneness in Athletics	*Joseph P. Dolan, Ph.D.*
3:30	Recess	
3:45	Only an Appendix	*Philip Thorek, M.D.*

Friday, September 20

9:00	The Problem of Delayed Puberty and Hypogonadotropic Eunuchoidism	*C. Alvin Paulsen, M.D.*
10:00	Acute Abdominal Injuries	*Philip Thorek, M.D.*
11:00	Recess	
11:15	The Chemotherapy of Leukemia and Lymphoma	*G. E. Cartwright, M.D.*
1:30	Newer Respiratory Disease Viruses in Children and Adults	*Clayton G. Loosli, M.D.*
2:30	Mental Depression—A Clinical Masquerade	*James S. Cheatham, M.D.*
3:30	Recess	
3:45	Common Problems in the Diagnosis and Therapy of Anemia	*G. E. Cartwright, M.D.*
4:45	Strapping Foot, Ankle and Knee Where Fractures are not Involved	*Joseph P. Dolan, Ph.D.*
7:30	Banquet at Topper Restaurant — Speaker: *Philip Thorek, M.D.* "Food for Thought"	

Saturday, September 21

9:00	Drug Induced Hematologic Disorders	*G. E. Cartwright, M.D.*
10:00	The Primary Atypical Pneumonias—Etiology Prevention and Treatment	*Clayton G. Loosli, M.D.*
11:00	Recess	
11:15	New Concepts Concerning Klinefelter's Syndrome	*C. Alvin Paulsen, M.D.*

The regular meeting of the State Board of Medicine was held in Boise, July 8, 9, 10. Board members attending the session included S. M. Poindexter, Boise, Chairman; W. Wray Wilson, Coeur d'Alene, Vice-Chairman; John E. Comstock, Pocatello; Charles E. Kerrick, Caldwell; Charles A. Terhune, Burley, and James S. Newton, Lewiston.

Four physicians successfully passed the written examination of the State Board of Medicine and were granted Idaho licensure. They were:

Enoch G. Dangerfield, Salt Lake City. Graduate University of Utah College of Medicine, June, 1961. Internship Swedish Hospital, Seattle, Wash., 1961-62.

Leslie Paul Youngs, Troy. Graduate Loma Linda University School of Medicine, Los Angeles, June, 1962. Internship Portland Sanitarium and Hospital, Portland, Ore., 1962-63.

W. C. Kurowski, Orofino. Graduate University of Warsaw, Warsaw, Poland, December, 1927. Internship St. Joseph's Hospital and Civic Hospital, Peterborough, Quebec, 1959-60. (Certified by the Educational Council for Foreign Medical Graduates.)

Harold A. J. Wiedmann, Twin Falls. Graduate Leopold-Franzens University, Innsbruck, Austria, February, 1951. Internship University Hospitals, Innsbruck, 1951-52. (Certified by the Educational Council for Foreign Medical Graduates.)

Six physicians who had been granted temporary licenses since the January 1963, session of the Board received permanent licensure. They were:

John M. Kissane, Pocatello; Jack D. Noyes, Mountain Home; Conlyn J. Cederblom, Coeur d'Alene; Walter F. Loomis, Ogden; William H. James, Council, and John S. Broz, Twin Falls.

Eight physicians were granted licensure without written examination on the basis of endorsement by states maintaining standards comparable to Idaho or through endorsement by the National Board of Medical Examiners. They were:

Howard H. Steel, Philadelphia (Idaho Falls). Graduate Temple University School of Medicine, Philadelphia, 1945. Internship Temple University Hospitals, Philadelphia, 1945-46, orthopedics.

Charles V. Beghtol, Orofino. Graduate University of Nebraska College of Medicine, Omaha, 1962. Internship Broadlawns Polk County Hospital, Des Moines, Iowa, 1962-63, general practice.

Robert K. Borron, Nampa. Graduate University of Oklahoma School of Medicine, Oklahoma City, 1959. Internship St. Anthony Hospital, Oklahoma City, 1959-60, obstetrics-gynecology.

John S. Dunlop, Clarkston, Washington. Graduate University of Illinois College of Medicine, Chicago, 1955. Internship Pierce County Hospital, Tacoma, Washington, 1955-56, obstetrics-gynecology.

George G. Hales, Blackfoot. Graduate University of Cincinnati College of Medicine, Cincinnati, Ohio. Internship L.D.S. Hospital, Salt Lake City, Utah, 1962-63, general practice.

Lyman B. Knutson, Idaho Falls. Graduate University of Washington School of Medicine, Seattle, 1960. Internship King County Hospital, Seattle, 1961-62, general practice.

LaVar M. Withers, Blackfoot. Graduate Temple University School of Medicine, 1962. Internship L.D.S. Hospital, Salt Lake City, Utah, 1962-63, general practice.

Norris A. Biggerstaff, Potlatch. Graduate Bowman Gray School of Medicine of Wake Forest College, Winston-Salem, North Carolina, 1960. Internship Public Health Service Hospital, Staten Island, N.Y., general practice.

Plans for activation of the Physical Therapy Registration Act, passed by the 1963 Legislature, were approved. The Board designated the following to serve as members of the Physical Therapy Advisory Committee: Mr. William R. Hull, Pocatello, one-year term; Mr. Douglas Raymond, Idaho Falls, two-year term, and Mr. J. Perry Silver, Boise, three-year term.

The Board set January, 1964, as the date for full implementation of registration of physical therapists in Idaho.

Three Temporary Licenses have been granted since the regular session of the Board in July:

Charles K. Brown, Twin Falls. Graduate University of Washington School of Medicine, June, 1952. Internship, Swedish Hospital, Seattle, July, 1953. Anesthesiology residency, Santa Clara County Hospital, San Jose, 1959-61. Granted T. L. 303, July 15, 1963, anesthesiology.

Kim O. Johnson, Idaho Falls. Graduate Temple University School of Medicine, Philadelphia, June, 1960. Internship U.S. Public Health Service Hospital, Brighton, Mass., June, 1961. General Practice residency U.S.P.H.S. Hospital, Norfolk, Va., June 1961-63. Granted T.L. 304, July 26, 1963, general practice.

Eugene M. Baldeck, Lewiston. Graduate University of Washington School of Medicine, June, 1959. Internship King County Hospital, Seattle, June, 1960. Residency in Ophthalmology, University of California Medical Center, San Francisco, July 1960-July 1963. Granted T.L. No. 305, July 29, 1963, ophthalmology.

OBITUARY

DR. ORVILLE MARTIN CLAY, *84, died July 12 in Nampa, Idaho. A graduate of the Gross Medical College of Denver in 1902, he practiced in Tacoma and Gig Harbor for 39 years prior to his retirement in 1958.*

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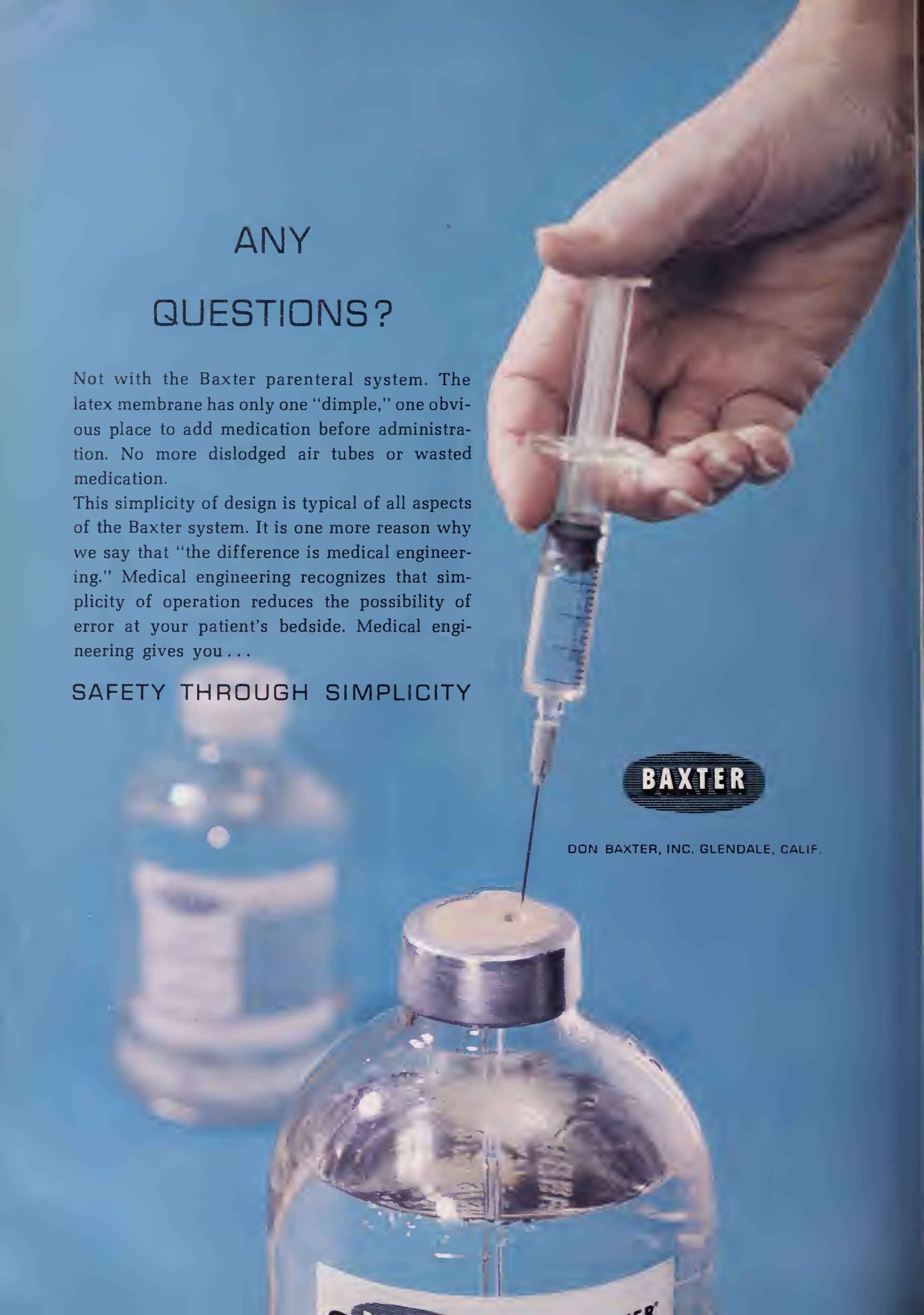

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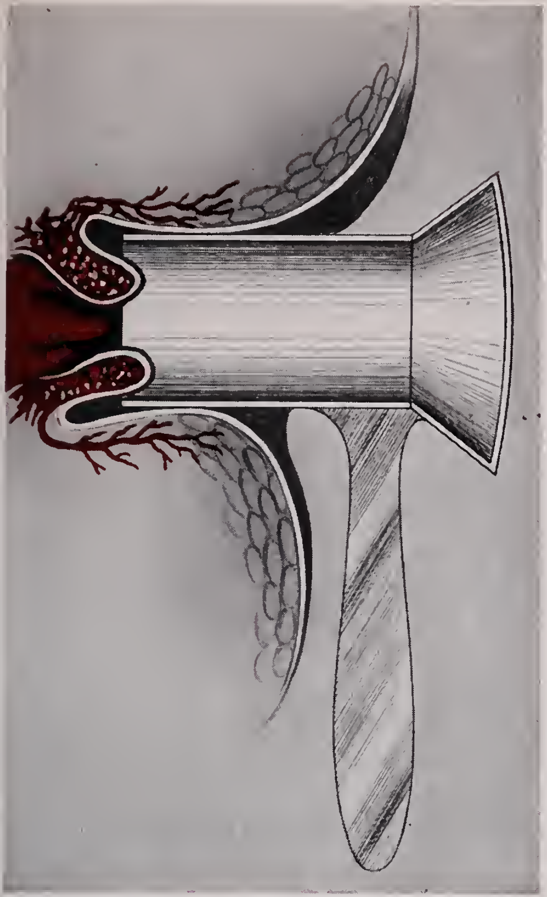

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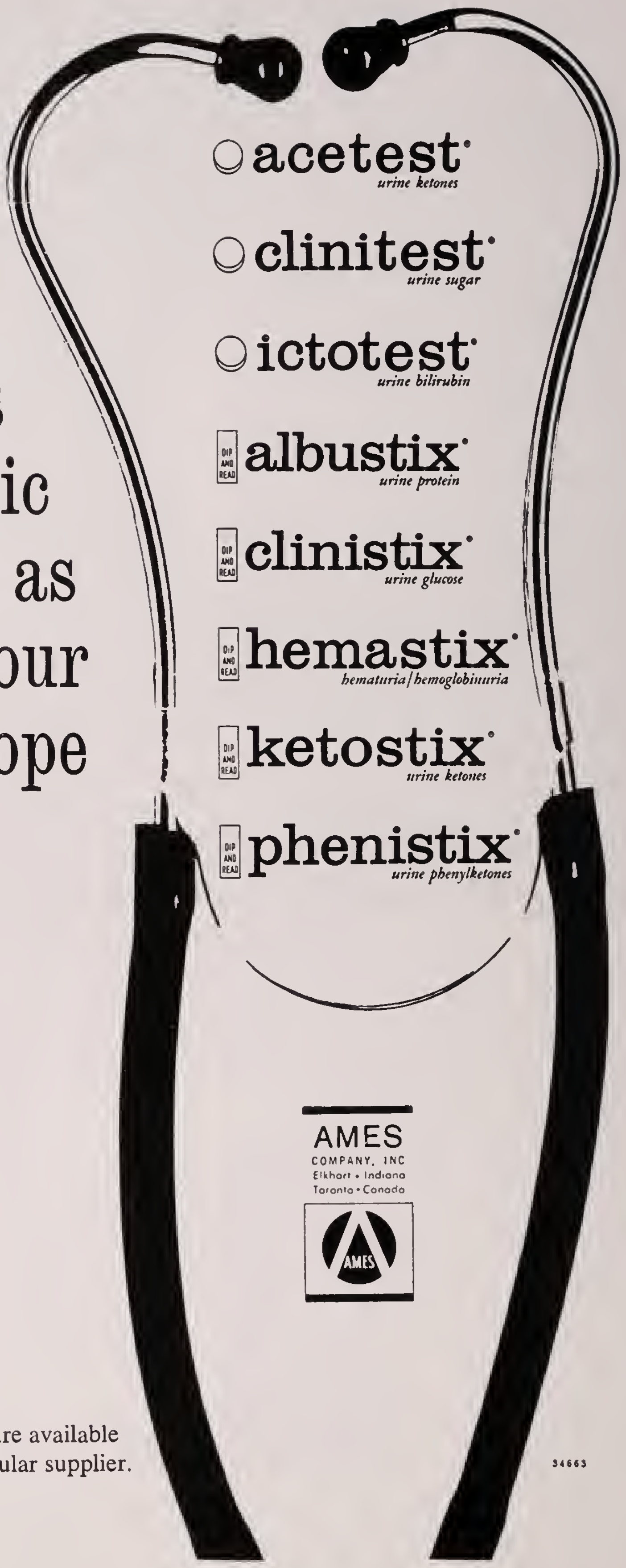

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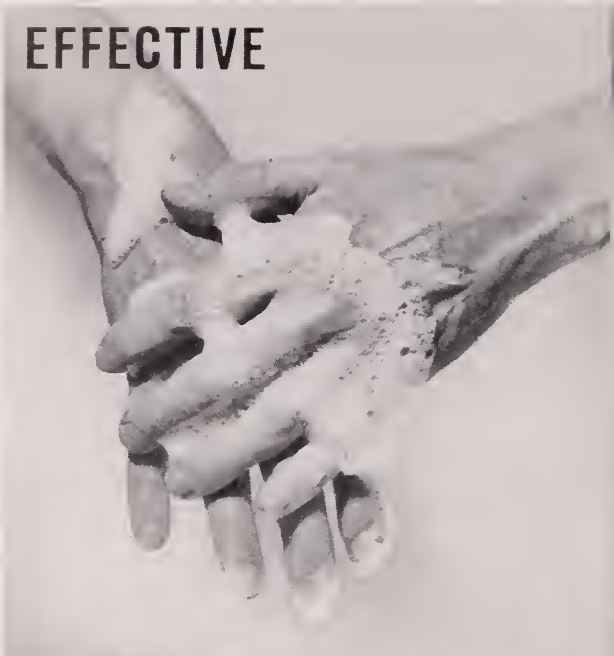

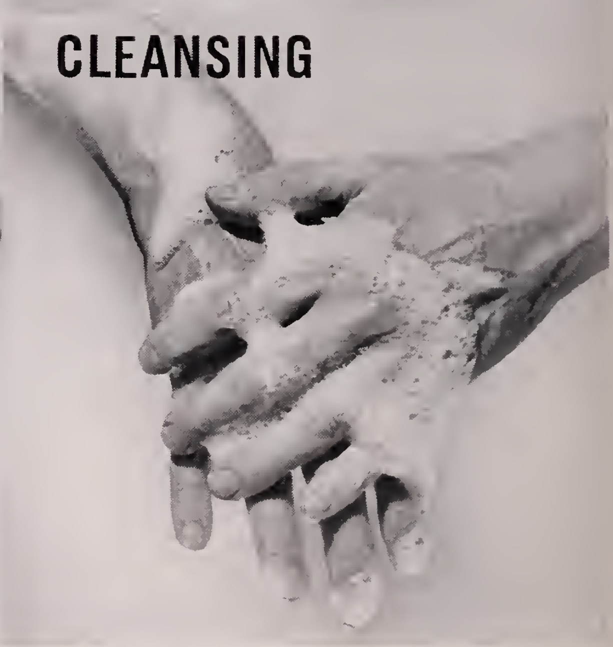

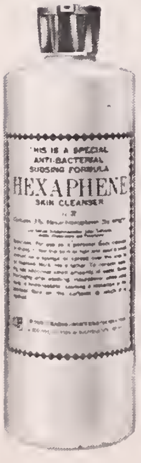

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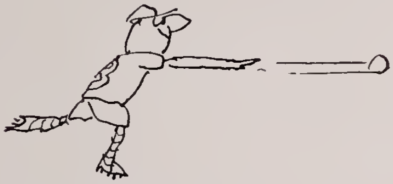

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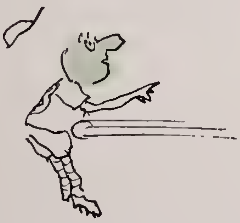

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*Scal, J. C.: Eye Ear Nose & Throat Month. 38:738 (Sept.) 1959.

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AMA Annual—San Francisco, June 21-25, 1964, New York, June 20-24, 1965.

AMA Clinical—Portland, Dec. 1-4, 1963; Miami Beach, Nov. 29-Dec. 2, 1964.

Idaho State Medical Association—June 17-20, 1964, Sun Valley.

Northwest Soc. for Clin. Research—Jan. 10-11, 1964, Vancouver, B. C.
Pres., Denys K. Ford, Vancouver
Sec., R. E. Beck, Vancouver

Oregon State Medical Society—Sept. 25-28, 1963, Portland.

Washington State Medical Association—Sept. 15-18, 1963, Seattle.

West Coast Allergy Society, Dec. 5-7, 1963, Las Vegas, Nevada
Pres., M. Coleman Harris, San Francisco
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Ore. Soc. Obst. & Gynec.—Portland, Park Heathman, 3rd Fri. (Oct., Nov., Jan., May)
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Oregon State Society of Anesthesiologists—Portland. 3rd Friday (except June, July, Aug.)
Pres., J. A. Siebs, Eugene
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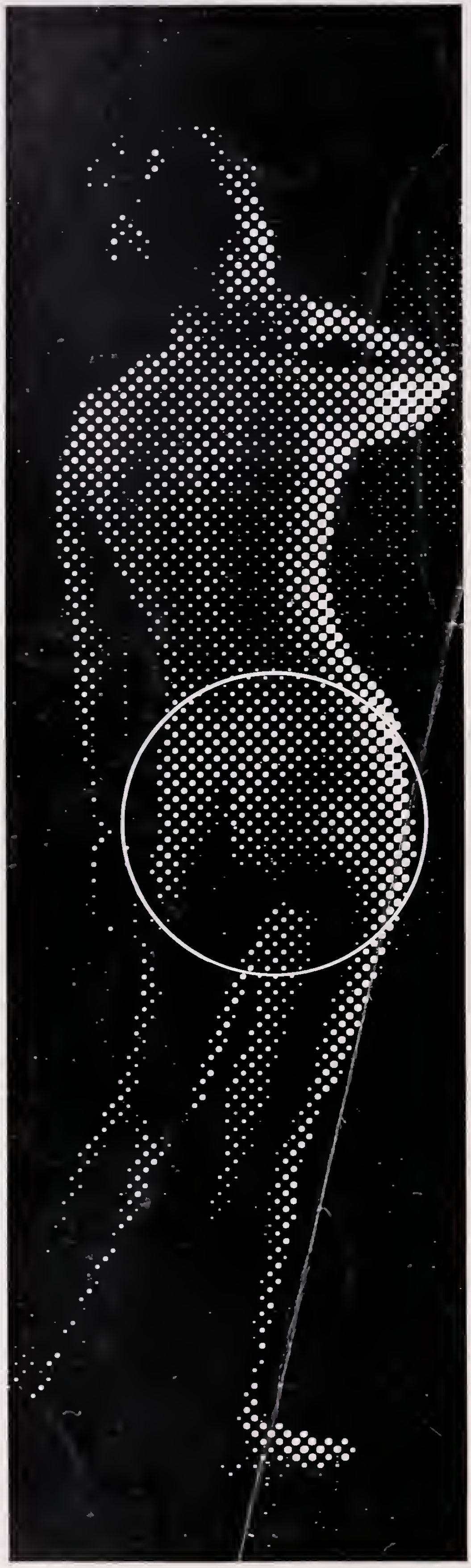

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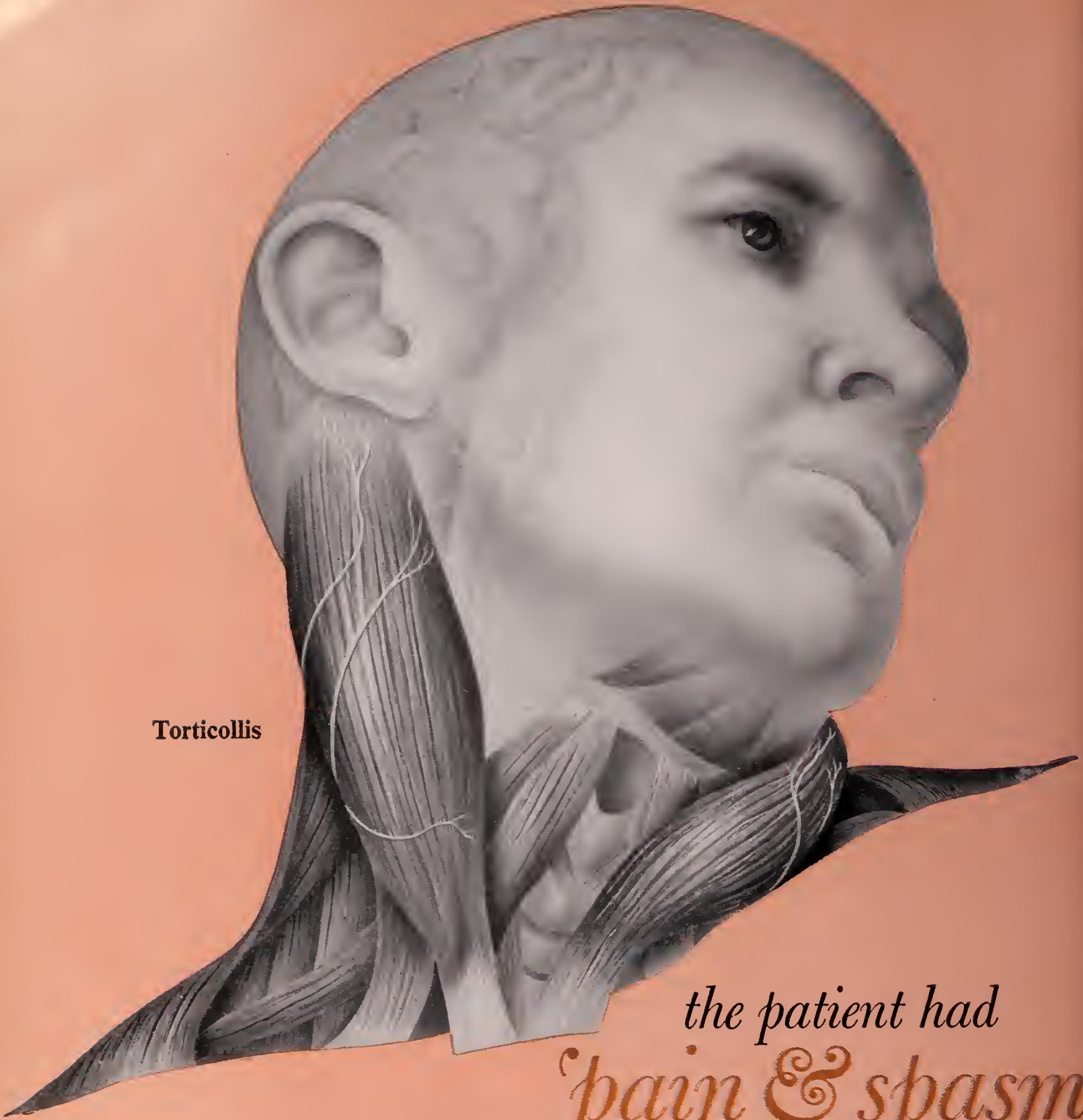

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In view of the rising incidence of fungal infections, such stand-by prophylaxis is good practice whenever broad-spectrum therapy is indicated.

Side Effects: Occasional nausea, vomiting and diarrhea. **Precautions:** With any broad spectrum antibiotic, the patient should be carefully watched for signs of secondary infections caused by nonsusceptible organisms. Use of tetracycline drugs, particularly long-term use, during periods of tooth development may cause discoloration of teeth.

Available as: ***Capsules*** (each containing 250 mg. tetracycline phosphate complex [HCl equiv.] and 50 mg. amphotericin B); ***Half Strength Capsules*** (each containing 125 mg. tetracycline phosphate complex [HCl equiv.] and 25 mg. amphotericin B); ***Syrup*** (125 mg. tetracycline [HCl equiv.], with potassium metaphosphate, and 25 mg. amphotericin B per 5 cc.); ***Pediatric Drops*** (100 mg. tetracycline [HCl equiv.], with potassium metaphosphate, and 20 mg. amphotericin B per cc.). (The liquid preparations also contain 0.2% sodium benzoate and 0.15% sodium metabisulfite as preservatives.)

For full information, see your Squibb Product Reference or Product Brief.

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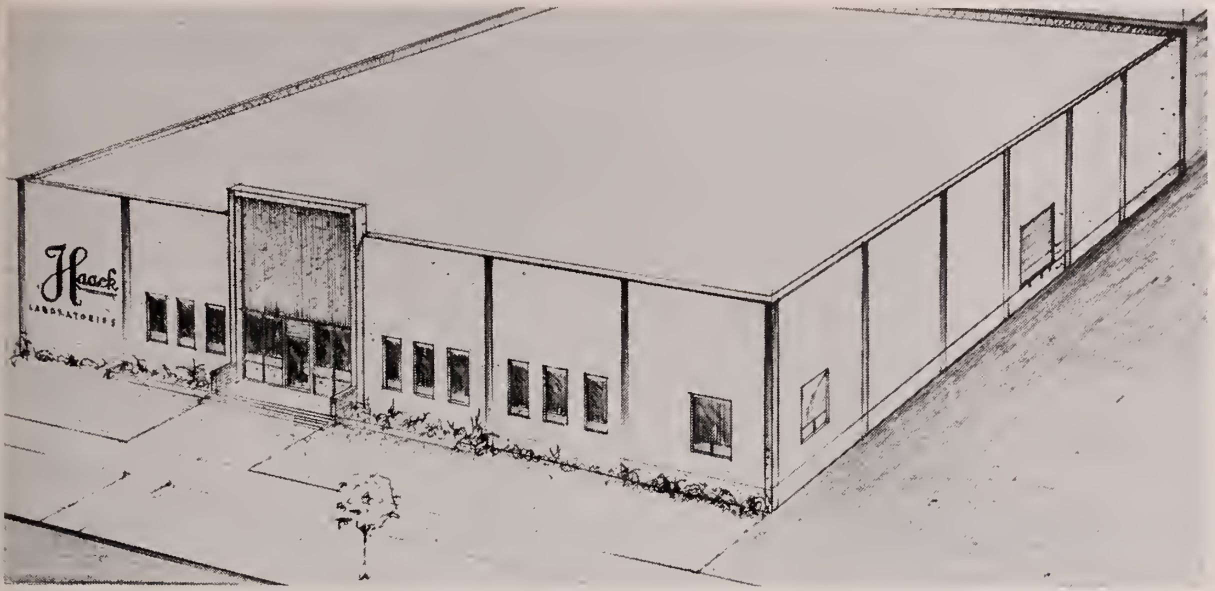

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peptic ulcer management without acid rebound

economical to use • less constipation

Each Tablet contains

Aluminum Hydroxide Gel (Dried)	4 grs. (0.26 gram)
Magnesium Trisilicate	7 grs. (0.45 gram)
Methylcellulose (mucin-like colloid)	1 gr. (0.065 gram)

Dosage: 2 tablets every 2 to 4 hours. Tablets to be chewed and swallowed with minimum amount of fluids. 1 tablespoonful of liquid neosorb equivalent to 2 neosorb tablets. Supplied in sizes 100, 500 and 1,000 tablets. Liquid in quarts and pints.

tablet or liquid

*Prescribe **NEOSORB®** with confidence* Haack SINCE 1908 Haack Laboratories, Inc., Portland 1, Oregon

"Doctor... I'm so tired all the time"

Lethargic patients respond to Ritalin
(methylphenidate hydrochloride)

When lethargy is a medical problem—in convalescence, chronic fatigue, mild depression, menopause, oversedation, and senility, for example—the gentle stimulant action of Ritalin (methylphenidate hydrochloride) restores normal physical and mental activity.

In his report, Siegler[1] states: "In mild depression or in clinical exhaustion syndromes, a marginal sympathomimetic drug like methylphenidate seems to be the drug of choice for initiating therapy. It does not have the toxic effects found with the amphetamines or with the hydrazines or other antidepressants."

Other significant comments on the clinical safety of Ritalin (methylphenidate hydrochloride): "At no time was there evidence of serious toxic reactions [in a study of 185 patients]. The drug did not produce alteration in blood forming factors, kidney and liver function."[2]

"No significant toxic effects have resulted after the continuous administration of methylphenidate for more than 3 years."[3]

INDICATIONS: Chronic fatigue.

CONTRAINDICATIONS: Marked anxiety, tension, and agitation.

CAUTION: Should not be used to increase mental or physical capacities beyond normal limits. Use cautiously with epinephrine or levarterenol.

SIDE EFFECTS: Nervousness, insomnia, anorexia, nausea, dizziness, palpitations, headache, drowsiness.

DOSAGE: 10 to 20 mg. b.i.d. or t.i.d.

SUPPLIED: *Tablets,* 5 mg. (pale yellow), 10 mg. (pale blue) and 20 mg. (pale orange).

REFERENCES: 1. Siegler, P. E., in Nodine, J. H., and Moyer, J. H. (Editors): *Psychosomatic Medicine,* The First Hahnemann Symposium, Lea & Febiger, Philadelphia, 1962, p. 582. 2. Lapolla, A.: Western Med. *2*:383 (Sept.) 1961. 3. Yoss, R. E., and Daly, D. D.: Pediatrics *25*:1025 (June) 1960.

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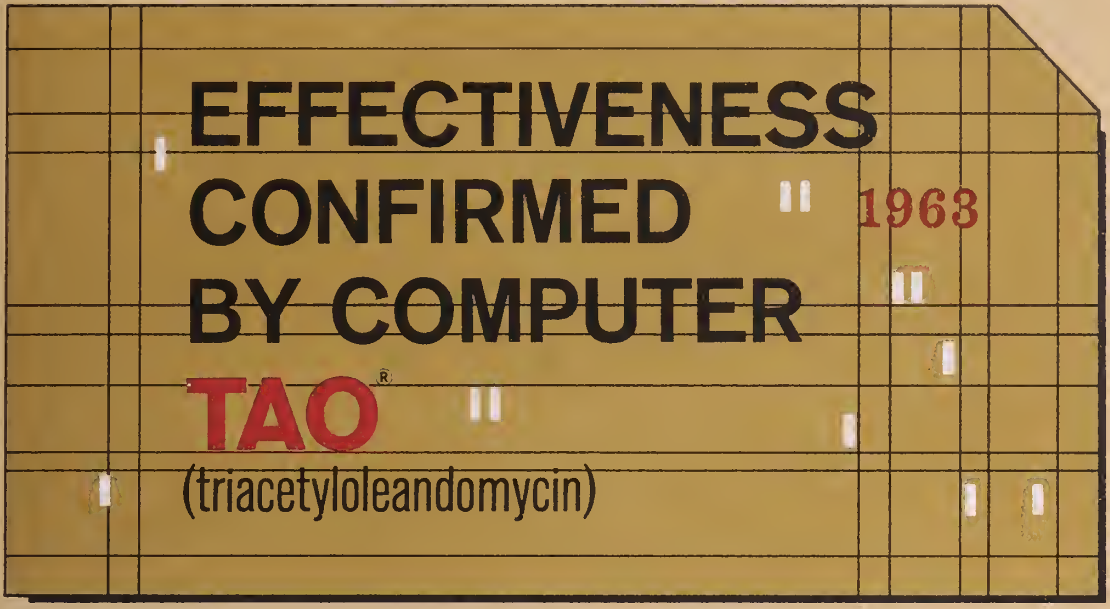
Ritalin® hydrochloride (methylphenidate hydrochloride CIBA)



EFFECTIVENESS CONFIRMED BY COMPUTER

1963

TAO®

(triacetyloleandomycin)

NOW FROM 66 HOSPITALS...

NATIONWIDE COMPARISON OF MICROBIAL SUSCEPTIBILITY TO 5 LEADING ANTIBIOTICS

The 1963 antibiotics survey is unprecedented in its scope. In all, susceptibility results of 9,331 cultures were collected from 66 hospitals in 26 states. The bacteria studied were isolated from overt clinical infections, and tested by the disc sensitivity method for susceptibility to five widely-used antibiotics.

Each participating hospital laboratory reported the over-all susceptibility of all bacteria studied each week. The data thus collected were then compared and analyzed by electronic data processing equipment.

The in vitro findings indicate the over-all superiority of TAO (triacetyloleandomycin) over four leading antibiotics against Staphylococcus aureus (coagulase positive), Streptococcus pyogenes (beta-hemolytic), Diplococcus pneumoniae and Streptococcus pyogenes Group D (enterococcus). These 1963 data broaden and confirm the 1962 study of 9,872 cultures in this continuing hospital survey of antibiotics[2]. →

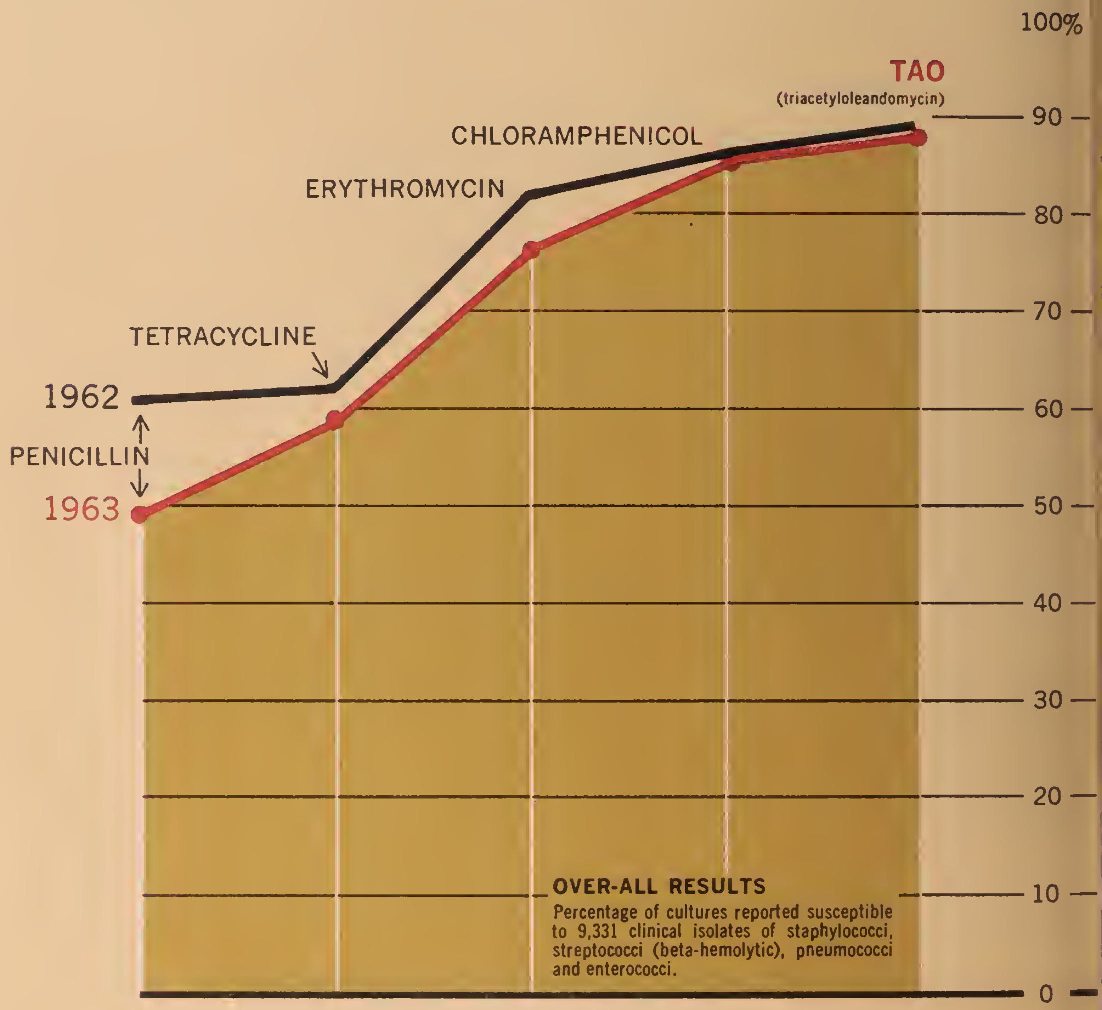
EFFECTIVENESS CONFIRMED BY COMPUTER

1963

TAO
(triacetyloleandomycin)

NOW FROM 66 HOSPITALS...

RESULTS FROM new 1963 NATION



OVER-ALL RESULTS
Percentage of cultures reported susceptible to 9,331 clinical isolates of staphylococci, streptococci (beta-hemolytic), pneumococci and enterococci.

SUSCEPTIBILITY RESULTS BY ORGANISM

	Staphylococcus (coagulase positive) (5440)	Streptococcus (β-hemolytic) (1519)	Pneumococcus (1130)	Enterococcus (1242)
TAO (triacetyloleandomycin)	88.0%	95.2%	97.1%	63.9%
Erythromycin	68.9%	96.7%	96.7%	68.5%
Tetracycline	50.9%	79.9%	92.9%	36.6%
Chloramphenicol	82.2%	94.2%	96.8%	72.3%
Penicillin	27.0%	94.9%	96.8%	45.0%

(figures in parentheses indicate total number of cultures)

WIDE SURVEY OF ANTIBIOTICS[1]

Staphylococcal Susceptibility. Through the use of electronic data processing equipment, the 1963 antibiotics survey reveals other important data on relative antibiotic effectiveness. One example of this is the number and percentage of staphylococcal cultures susceptible to none of the antibiotics studied, to one antibiotic only, and to all five antibiotics. Significantly, only 3.7% of staphylococcal cultures were resistant to all five of these frequently-prescribed antibiotics. About 21% of all staphylococci cultures were susceptible to all five antibiotics.

THE FOLLOWING CHART SHOWS THE DATA COMPILED WHEN ONLY ONE ANTIBIOTIC COULD CONTROL THE STAPHYLOCOCCI. AS SHOWN, THE CHART INDICATES HIGHEST LIKELIHOOD OF SUCCESS WITH TRIACETYLOLEANDOMYCIN AND CHLORAMPHENICOL, IN THAT ORDER.

Confirmed Clinically. This massive in vitro data further supports clinical findings. As an example, Shubin[3] found that of 129 patients with upper or lower respiratory infections treated with TAO (triacetyloleandomycin), 120 had a good response. A "good" response generally showed "reduction in temperature and toxicity within 48 hours after initiation of therapy, with subsequent clinical and bacteriological cure of infection."[3]

References: 1. Isenberg, Henry D., Ph.D.: "Nationwide Comparison of Microbial Susceptibility with Standardized Discs." Scientific Exhibit presented at the meeting of the American Medical Association, Atlantic City, N. J., June 16-20, 1963. 2. Fowler, J. Ralph, Watters, John L. and Levy, Arthur M.: Bacterial Susceptibility Patterns as Related to Geographic Variation and Anatomical Source, Clinical Medicine, 70:547 (Mar.) 1963. 3. Shubin, H. et al: Further Clinical Studies with Triacetyloleandomycin, Antibiotic Med. and Clin. Ther., 6:156 (Mar.) 1959.

Number of antibiotics effective	Number and percentage of cultures susceptible				
	Chloramphenicol	Erythromycin	Penicillin	Tetracycline	Triacetyloleandomycin
One	246 (4.5%)	14 (0.2%)	11 (0.2%)	15 (0.3%)	327 (6.0%)

TAO®

(triacetyloleandomycin)

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indications: The bacterial spectrum for which TAO (triacetyloleandomycin) primarily is effective includes staphylococci, streptococci, pneumococci and gonococci. It is recommended for acute, severe infections where adequate sensitivity testing has demonstrated susceptibility to this antibiotic. It has been shown to be particularly effective in acute, severe infections of the respiratory tract, bones and joints, genitourinary tract and in staphylococcal enterocolitis. It is not recommended for prophylaxis or in the management of infectious processes which may require more than 10 days continuous therapy. In view of the possible hepatotoxicity of this drug, when therapy beyond 10 days proves necessary, other less toxic agents, of course, should be used unless the organism is resistant to those agents, or in those cases where hypersensitivity precludes their use. If clinical judgment dictates continuation of therapy for longer periods, serial monitoring of liver profile is recommended, including BSP, transaminase (SGOT) and cephalin flocculation tests.

precautions and side effects: *Use of this drug may produce alterations in liver function tests and jaundice. Clinical experience available thus far indicates that these liver changes were reversible following discontinuation of the drug.* A review of studies by several independent investigators and reports from practicing physicians indicate that liver function abnormalities may occur in a significant number of patients following two weeks or more of continuous therapy with triacetyloleandomycin at 1.0 gram per day in divided doses. Clinical symptomatology, including jaundice, has been observed infrequently in these individuals. The drug is not recommended for subjects who have shown abnormal liver function tests or hepatotoxic reactions to it. Based on the use of this drug over a period exceeding 5 years, the incidence of jaundice considering all reports referable to this effect is 6.3 per million courses of therapy. When only those which definitely can be related to this drug are equated to usage, the incidence is 1.8 per million courses of treatment.

Although reactions of an allergic nature due to this drug are infrequent and seldom severe, those of the anaphylactoid type have occurred on rare occasions.

TAO®

(triacetyloleandomycin)

AVAILABLE AS:
Capsules (250 mg.; 125 mg.)
Ready-Mixed Oral Suspension
(raspberry-flavored, 125 mg./5 cc.)
Pediatric Drops (100 mg./cc.)

Roerig Rx

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Division, Chas. Pfizer & Co., Inc.
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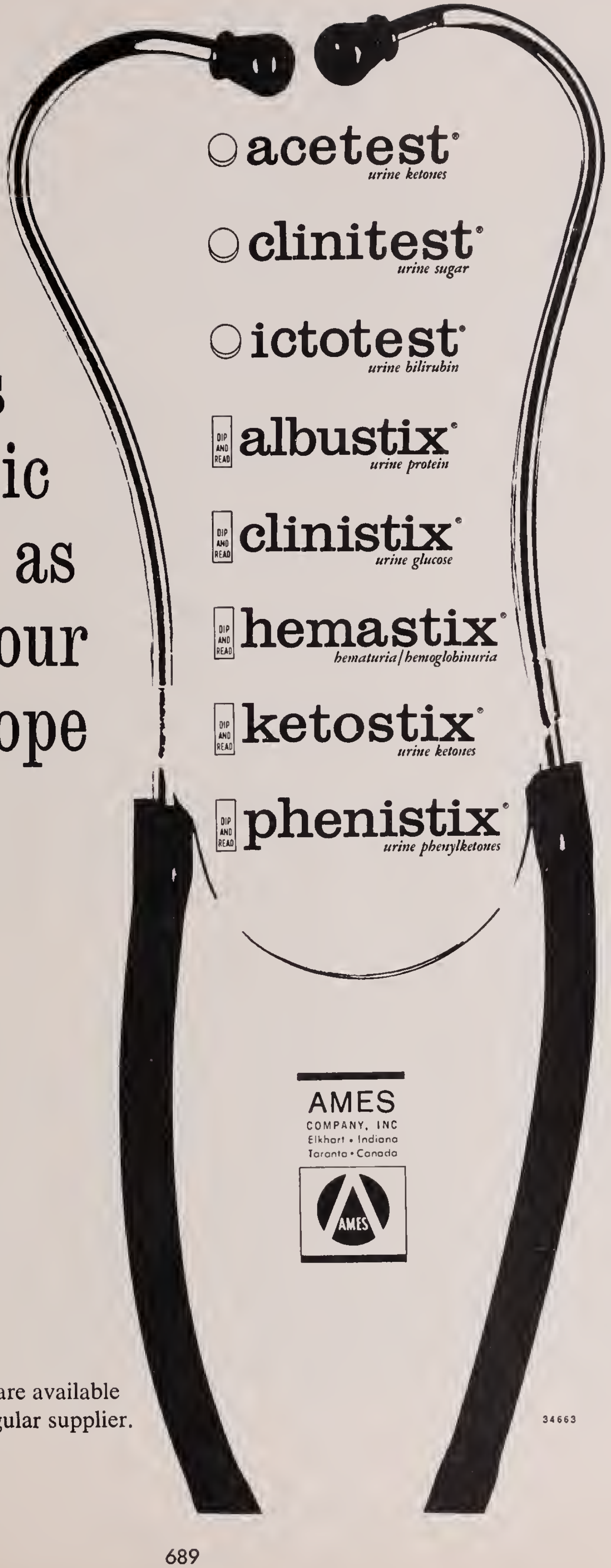

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urine ketones

DIP AND READ **phenistix®**
urine phenylketones

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Each scored yellow PERCODAN* Tablet contains 4.50 mg. dihydrohydroxycodeinone HCl (Warning: May be habit-forming), 0.38 dihydrohydroxycodeinone terephthalate (Warning: May be habit-forming), 0.38 mg. homatropine terephthalate, 224 mg. aspirin, 160 mg. phenacetin, and 32 mg. caffeine.

In a comprehensive range of indications marked by moderate to moderately severe pain, PERCODAN assures speed, duration, and depth of analgesia by the oral route . . . acts within 5 to 15 minutes . . . usually provides uninterrupted relief for 6 hours or longer with just 1 tablet . . . rarely causes constipation.

Average Adult Dose—1 tablet every 6 hours. **Side Effects and Contraindications**—Although generally well tolerated, PERCODAN may cause nausea, emesis, or constipation in some patients. PERCODAN should be used with caution in patients with known idiosyncrasies to aspirin or phenacetin, and in those with blood dyscrasias. **Also available:** PERCODAN®-DEMI, containing the complete PERCODAN formula but with only half the amount of salts of dihydrohydroxycodeinone and homatropine. Both products are on oral Rx in all states where laws permit. Narcotic order required. **Literature on request.**

ENDO LABORATORIES Richmond Hill 18, New York

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*U. S. Pats. 2,628,185 and 2,907,768

Both the Cream and Ointment rarely sensitize and are bactericidal to virtually all gram-positive and gram-negative organisms found topically, including Pseudomonas aeruginosa and Staphylococcus aureus.

Indications: Wherever infection occurs and is accessible for topical therapy.

Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

'NEOSPORIN'® brand
POLYMYXIN B / NEOMYCIN / GRAMICIDIN
ANTIBIOTIC CREAM

Ingredients: Each gram contains: 'Aerosporin'® brand Polymyxin B* Sulfate 10,000 Units; Neomycin Sulfate 5 mg. (equivalent to 3.5 mg. Neomycin Base); Gramicidin 0.25 mg.

In a smooth, white, water-washable vanishing cream base with a pH of approximately 5.0. Inactive ingredients: liquid petrolatum, white petrolatum, distilled water, propylene glycol, polyoxyethylene polyoxypropylene compound, emulsifying wax and 0.25% methylparaben as preservative.

*U.S. Patent Nos. 2,565,057-2,695,261

Available: In 15 Gm. tubes.

'NEOSPORIN'® brand
POLYMYXIN B / BACITRACIN / NEOMYCIN
ANTIBIOTIC OINTMENT

Ingredients: Each gram contains: 'Aerosporin'® brand Polymyxin B Sulfate 5,000 Units; Zinc Bacitracin 400 Units; Neomycin Sulfate 5 mg. (equivalent to 3.5 mg. Neomycin Base).

Available: Tubes of 1 oz., 1/2 oz. and 1/8 oz.

Complete literature available on request from Professional Services Dept. PML.

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(U.S.A.) INC., Tuckahoe, N.Y.**

Lifts depression..

"I feel like my old self again!" Thanks to your balanced therapy with 'Deprol', her depression has lifted and her mood has brightened – while her anxiety and tension have been calmed. She sleeps better, eats better, and normal drive and interest have replaced her emotional fatigue.

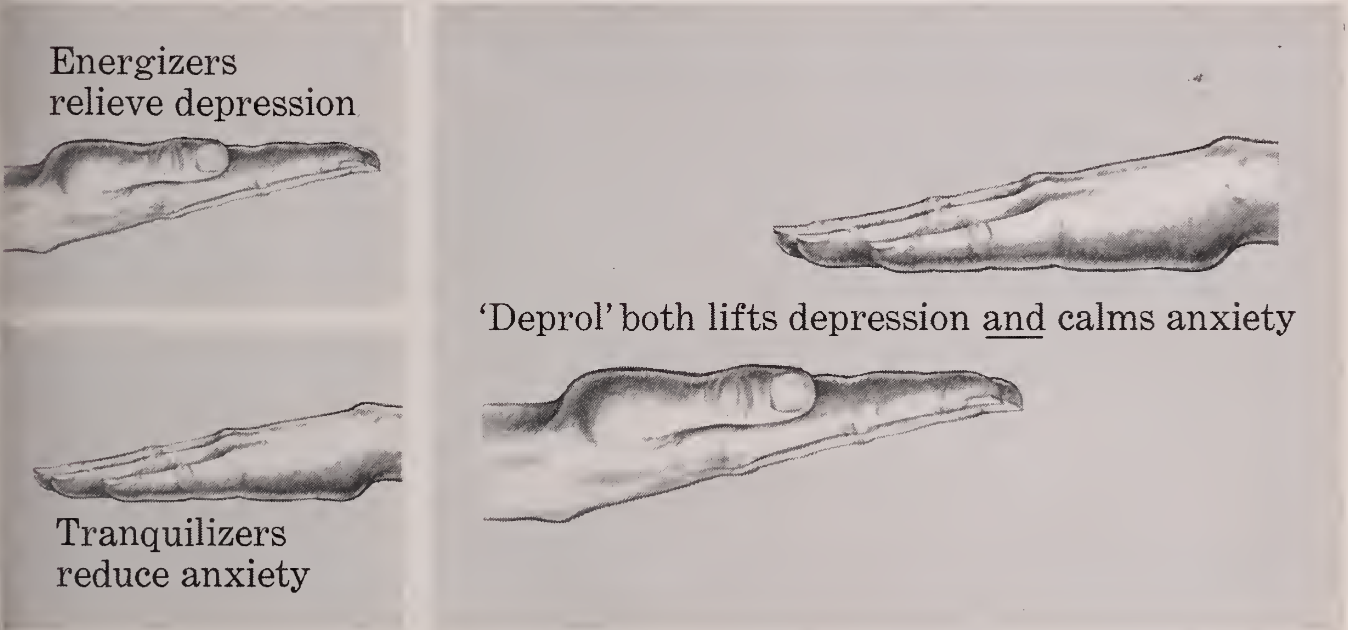
as it calms anxiety

Brightens mood...relaxes tension

Energizers may stimulate the depressed patient, but they often aggravate anxiety and insomnia. Tranquilizers may help the anxious patient, but they often deepen depression and emotional fatigue.

'Deprol' avoids these "seesaw" effects; it relieves both depression and anxiety. Moreover, it does not cause liver damage, psychotic reactions or changes in sexual function.

Slight drowsiness and, rarely, allergic reactions, due to meprobamate, and occasional dizziness or feeling of depersonalization in higher dosage, due to benactyzine, may occur. Meprobamate may increase effects of excessive alcohol. Use with care in patients with suicidal tendencies. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction. Withdraw gradually after prolonged use at high dosage.


Energizers relieve depression
Tranquilizers reduce anxiety
'Deprol' both lifts depression and calms anxiety

Usual Dosage: 1 tablet q.i.d. May be increased gradually, as needed, to 3 tablets q.i.d.; with establishment of relief, may be reduced gradually to maintenance levels.

'Deprol'®

meprobamate 400 mg.
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4,770,000 MOTOR VEHICLE INJURIES A YEAR

Motor-vehicle accidents injured approximately 4,770,000 persons yearly during the two-year period, July, 1959-June, 1961, according to estimates by the National Health Survey.

Of the victims, 2,890,000 were injured in moving-motor-vehicle accidents and 1,881,000 were injured in nonmoving-motor-vehicle accidents, the survey stated. In the latter category were cases of persons injured while repairing, cleaning, or performing similar operations on a motor vehicle.

Moving-motor-vehicle accidents resulted in injury to 1.6 persons per 100 population per year. These accidents caused 49.1 days of restricted activity and 14.6 days of bed disability per 100 persons and 25.3 work-loss days per 100 currently employed persons during the year.

Persons between 15 and 24 years of age had the highest rate of moving-motor-vehicle injury but had the lowest rate of time lost as a result of disability. On the other hand, persons over 65 had the lowest rate of injury but the longest period of disability.

Medical Tribune, May 6, 1963

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Workshop on Teratology

EDITOR, NORTHWEST MEDICINE:

The Commission on Drug Safety will sponsor a workshop on teratology at the University of Florida February 2-8, 1964, through a grant from the Pharmaceutical Manufacturers Association.

Impetus for the program was from the Commission's Subcommittee on Teratology, under chairmanship of Josef Warkany, Professor of Research Pediatrics, The Children's Hospital Research Foundation, University of Cincinnati. The report of that Subcommittee cited establishment of the workshop as the first needed scientific step in avoiding such tragic episodes as that of thalidomide.

The Workshop, therefore, is a pilot program which will have as its faculty many distinguished scientists in the field of teratology. Attendance will be limited to 40 participants who will be selected on the basis of their probable contributions following this training.

Since this initial program is of basic scientific importance, the Commission has asked that it be brought to your attention with the request that it be used in any of your publications and perhaps announced at appropriate meetings.

For further information, or to register for the meeting, please write to me at the Commission on Drug Safety, 221 North LaSalle Street, Chicago 1, Illinois.

Sincerely,
Duke C. Trexler
Executive Director

---

from confusion and apathy ...
... to Clarity and Interest

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A safe effective cerebral stimulant and vasodilator for your forgetful aging patient. On Cerebro-Nicin therapy, your patient shows improvement in social activity and relationships, and greater concern with personal appearance.

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PTZ (Pentamethylene Tetrazole)	100 mg.
Nicotinic Acid	100 mg.
Niacinamide	5 mg.
Vitamin C	100 mg.
Thiamine HCl	25 mg.
Riboflavin	2 mg.
Pyridoxine	3 mg.
1-Glutamic Acid	50 mg.

INDICATIONS: Apathy, dizzy spells, mild behavior disorders, mental confusion, functional memory defects.

AVERAGE DOSE: One capsule three times daily.

AVAILABLE: Bottles of 100 and 500 capsules.

CAUTION: Most persons experience a flushing and tingling sensation after taking a higher potency niacin-containing compound. As a secondary reaction some will complain of nausea and other sensations of discomfort. This reaction is transient and is rarely a cause for discontinuance of the drug if the patient is forewarned to expect the reaction.

WARNING: Contraindicated in the presence of epilepsy.

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When emotional disturbance is a significant factor in dysfunction of gastrointestinal tone, motility and secretion, Pro-Banthīne with Phenobarbital provides the dual activity that leads to easier management of both the patient and his problem:

Pro-Banthīne (propantheline bromide) to neutralize the effect of excitatory impulses at visceral end organs, *and*

Phenobarbital to moderate emotional incitement centrally.

Pro-Banthīne with Phenobarbital is indicated when a mild to a moderate psychic element is a factor in: Peptic ulcer • Biliary dyskinesia • Pylorospasm • Intestinal hypermotility • Spastic colon • Gastritis • Other dysfunctions of the gastrointestinal tract.

Dosage: One tablet four times a day.

Urinary hesitancy, xerostomia, mydriasis and, theoretically, a curare-like action might occur with Pro-Banthīne (brand of propantheline bromide). It is contraindicated in the presence of glaucoma or severe cardiac disease. The usual precautions with regard to phenobarbital should be taken.

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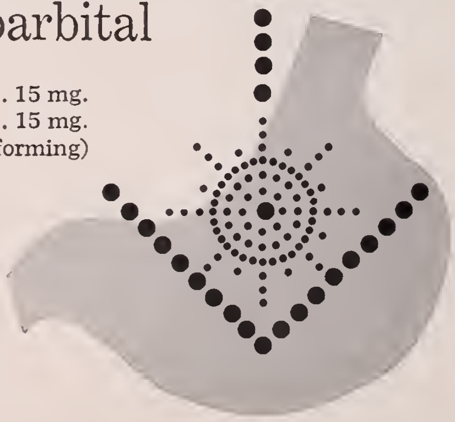


Chronic Fluorine Poisoning

Without fear of contradiction it may be said that the only ground for universal agreement on the effect of fluorine is its action on the adrenal glands. Mere mention of the word is sufficient to raise blood pressures and the violence of emotional response has hardly been exceeded since cessation of the argument about how many angels could stand on the head of a pin. At least this seems to be true in the United States.

Dangerous effects other than hypertensive have been claimed by one camp, complete innocuousness by the other. Neither side has offered much evidence capable of standing up after analytic onslaughts by the other. At least, nothing much in the way of solid proof has found its way into the *medical* literature in this country. Veterinarians seem to know more and write more about fluorine effects than do physicians.

Antifluoridationists hint darkly at suppression by big government or by big industry, citing the fact that foreign literature carries a great deal of information on toxic effects of fluorine. It is true that some investigators have sent manuscripts abroad for publication, claiming that no editor in the United States would accept their material. An example is Ionel Rapaport, Ph.D., of the Psychiatric Institute at the University of Wisconsin. In 1956 he conducted a study in Illinois, and found mongolism more than twice as frequent in areas with water bearing one part per million of fluoride or more, as compared to areas where the fluoride content was 0.3 ppm or less. Rapaport's study was finally published in the *Bulletin de l'Academie Nationale de Medecine* (Paris).

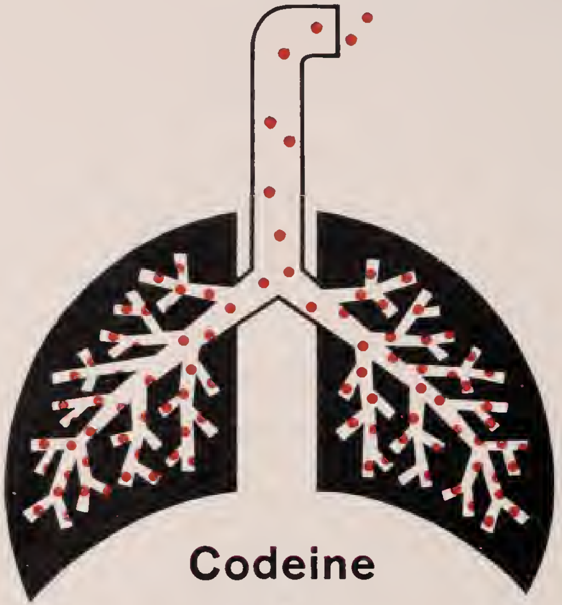
Chronic fluorine poisoning is recognized in South Africa where Douw G. Steyn, formerly Professor of Pharmacology, Medical Faculty of the University of Pretoria, now Chief Research Officer, Division of Life Sciences, Atomic Energy Board, Pretoria, has long been a student of the condition. In an article published in the April, 1963 issue of the *South Africa Medical Journal* he offers conclusions based on investigations into chronic fluorine intoxications in man and animals over the last 25 years.

After reporting that chronic fluorine poisoning occurs in large areas of South Africa where subterranean waters contain harmful concentrations of fluoride, and describing children with pains in their legs, bone abnormalities "short and markedly thickened feet and toes, thickened ankles, osteophytes" (all of which are effects well recognized in animals as reported in American veterinary medical literature) he says:

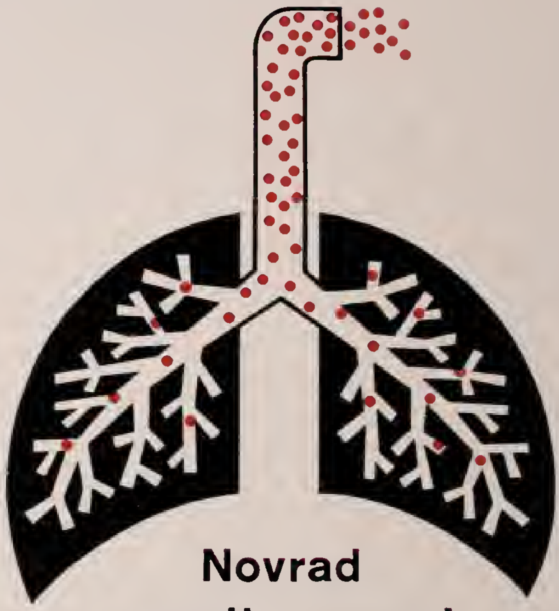
> "Factors that govern the amount of harm that may ensue in an area where the drinking water contains fluorine include the following: (1) length of period over which the water was drunk; (2) other minerals present in the water; (3) age; (4) sex; (5) state of health; (6) occupation; (7) diet; (8) use of beverages (tea, wine, etc.); (9) drugs taken; (10) the use of fluorine-containing insecticides on fruits and vegetables; and (11) in the case of artifical flouridation of drinking water, the marked variation in fluorine-concentrations at the different points of the water reticulation systems. Undoubtedly, the two most important factors affecting the toxicity of fluorine are the diet and the great variations in the quantities of water drunk by individuals under different conditions. It is known that certain individuals may drink more than 20 times as much water as others do."

This report may not constitute the solid kind of proof so lacking in the question usually argued emotionally rather than intellectually, but it appears to be based on observation by an unusually knowledgeable individual. If it raises blood pressures, the fault is not Dr. Steyn's. ■

both reduce the cough, but . . .



Codeine reduces expectoration



Novrad permits normal expectoration

Indications: Novrad is an antitussive indicated for patients with cough. **Contraindications:** No absolute contraindication has been established; in some acute and chronic clinical conditions, however, it may not be advisable to decrease the frequency or intensity of cough. **Side-Effects:** Nausea has occurred in 1.3 percent of cases reported, but other gastro-intestinal symptoms are rarely seen. Rash or urticaria, drowsiness, jitteriness, and dizziness have been observed.

Additional information available upon request. Eli Lilly and Company, Indianapolis 6, Indiana.

single-entity, non-narcotic

NOVRAD®

LEVOPROPOXYPHENE

(as the napsylate)

Lilly

300199

Experimental Air Embolism

JAMES R. ATKINSON, M.D., Phoenix, Arizona

Air embolism can be produced by a variety of mechanisms. Air under atmospheric pressure can be drawn into the venous system by the negative pressure phase of the normal respiratory cycle, if the venous system is open to the atmosphere.[1,2] Intravascular introduction of air is an ever present hazard of the many extracorporeal circulatory devices in use today. Accidental air introduction as a result of a faulty pump input catheter once gave me an unfortunate opportunity to see the presence of air in the cerebral vasculature in man. Small bubbles, with sharp air-blood interface, were observed passing through small cortical pial arteries but foam was not observed.

Another source of air embolism has become of increasing concern with the advent of sport diving. This has resulted from the widespread use of self-contained underwater breathing apparatus (SCUBA). This equipment makes air available to the diver at a pressure equal to the pressure of his depth in the water, so that the rather feeble negative pressure developed during

abstract

JAMES R. ATKINSON (Barrow Neurological Institute, Phoenix, Arizona, USA) Experimental Air Embolism, Northwest Med 62:699-703 (Sept) 1963

Investigation was undertaken, following observation by a practicing physician, that modified Trendelenberg position induced prompt recovery of a diver who had suffered air embolism. Cerebral vessels in the cat were observed through a wide craniotomy exposing the hemisphere. Intravenous air did not mimic development of diver's air embolism. Controlled moderate increase of intrapulmonary air pressure resulted in production of air emboli in cerebral arteries with failure of flow apparently related to the air-blood interface. When the head of the animal was lowered, the air-blood interface moved, circulation was restored, and subsequent vasodilatation was observed. It is postulated that surface tension at the interface balances the force of arterial pressure to determine the point in the vessel at which circulation will stop. Increased intravenous pressure, induced by lowering the body axis, dilates the venous side of the drainage system and the capillary bed. This favorably alters the ratio between circumference of the interface and arterial pressure available to push the air embolism into the veins. The supine Trendelenberg position may be considered as a first aid measure until recompression can be established.

abstracto

JAMES R. ATKINSON (Barrow Neurological Institute, Phoenix, Arizona, USA) Experimental Air Embolism, Northwest Med 62:699-703 (Sept) 1963

Una investigación se llevó a cabo, después que un médico observó que la posición de Trendelenberg modificada indujo una pronta recuperación en un buzo que sufría de embolismo de aire. Se observaron los vasos cerebrales en el gato, a traves de una craniotomía, exponiendo el hemisferio. La inyección de aire en las venas del gata no dió lugar a la producción del síndrome de embolismo de aire, como se ve en los buzos. Un moderado y controlado aumento de la presión de aire intrapulmonario resultó en la producción de émbolos aéreos en las arterias cerebrales, con falla de flujo aparentemente debida a la íntima mezcla ("interface") de burbujas y sangre. Cuando se bajaba la cabeza del animal, la "interface" se cambiaba, la circulación se restoraba con subsecuente vasodilatación. Se postula que la tension superficial de la "interface" balancea la fuerza de la presión arterial hasta determinar el lugar en el vaso, en el cual la circulación para. El aumento de la presión en las venas debido a la fuerza de gravedad dilata no solo el sistema venoso sino también el lecho capilar; esto cambia favorablemente la diferencia entre la circumferencia de la interface y la presión arterial existente dando lugar al empuje de las burbujas a las venas. Concluyendo, la posición de Trendelenberg se debe usar como medida inicial hasta que la recompresión en cámara se establece.

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The author wishes to express his appreciation to Charles A. Kruse, M.D., for making his manuscript available prior to publication, and to Mr. Robert W. Staunton for technical assistance in some of the experiments.

normal inspiration provides an adequate flow of air. The hazardous phase of this activity occurs during ascent. If air is not continuously exhaled, intrapulmonary pressure rapidly exceeds ambient pressure and air is forced from the lungs into the pulmonary vascular bed through mechanical tearing of normal membrane systems. Pneumothorax produced by rupture of the visceral pleura is also a hazard. Lung overpressures of less than 100 mm mercury have been shown to produce air embolism in the dog.[3,4] This is equivalent to less than five feet of water. Normal ascent rate is 25 to 60 feet a minute. Embolism can occur in seconds as the diver swims toward the surface. Air embolism can occur, even if the diver exhales during ascent, if pulmonary disease is present which permits trapping of high pressure air in a lung segment by ball valve action.[5] Pulmonary cysts may be associated with this condition; at present, it is unclear whether air embolism results because of air trapped in cysts or if air expands within the lung, producing traumatic cysts.[6,7]

Severe neurologic symptoms are common in the first few minutes following development of air embolism.[6,8] Preferred therapy, when facilities are available, is prompt chamber recompression to reduce volume of emboli and enhance physical solution of the air.[9,10] The Navy has had considerable experience with this mode of therapy during training for submarine escape.[6] Unfortunately, such facilities are not widely available.

The present study was instigated as a result of interest developed in a case of air embolism treated by a Seattle physician and recently reported in this journal.[11] A severe case of clinical air embolism developed in a diver during free ascent training in a tank. He had marked neurologic signs and symptoms (coma, flaccid hemiplegia, anisocoria) which cleared in less than two hours to an asymptomatic, ambulatory state. Therapy had consisted of placing the patient supine on an examining table and rocking him from a 15 degree Trendelenberg position to a level position. This unusual therapy had been utilized as a result of the physician's astute observation that during handling by untrained personnel, the patient had responded briefly to the head down position.

In view of the often rapid and fatal outcome of this condition, this represented an unusual and encouraging response. Some excellent experimental studies were done in this field more than twenty years ago.[12] The present study was undertaken to elucidate some of the mechanisms underlying this clinical observation.

pilot study

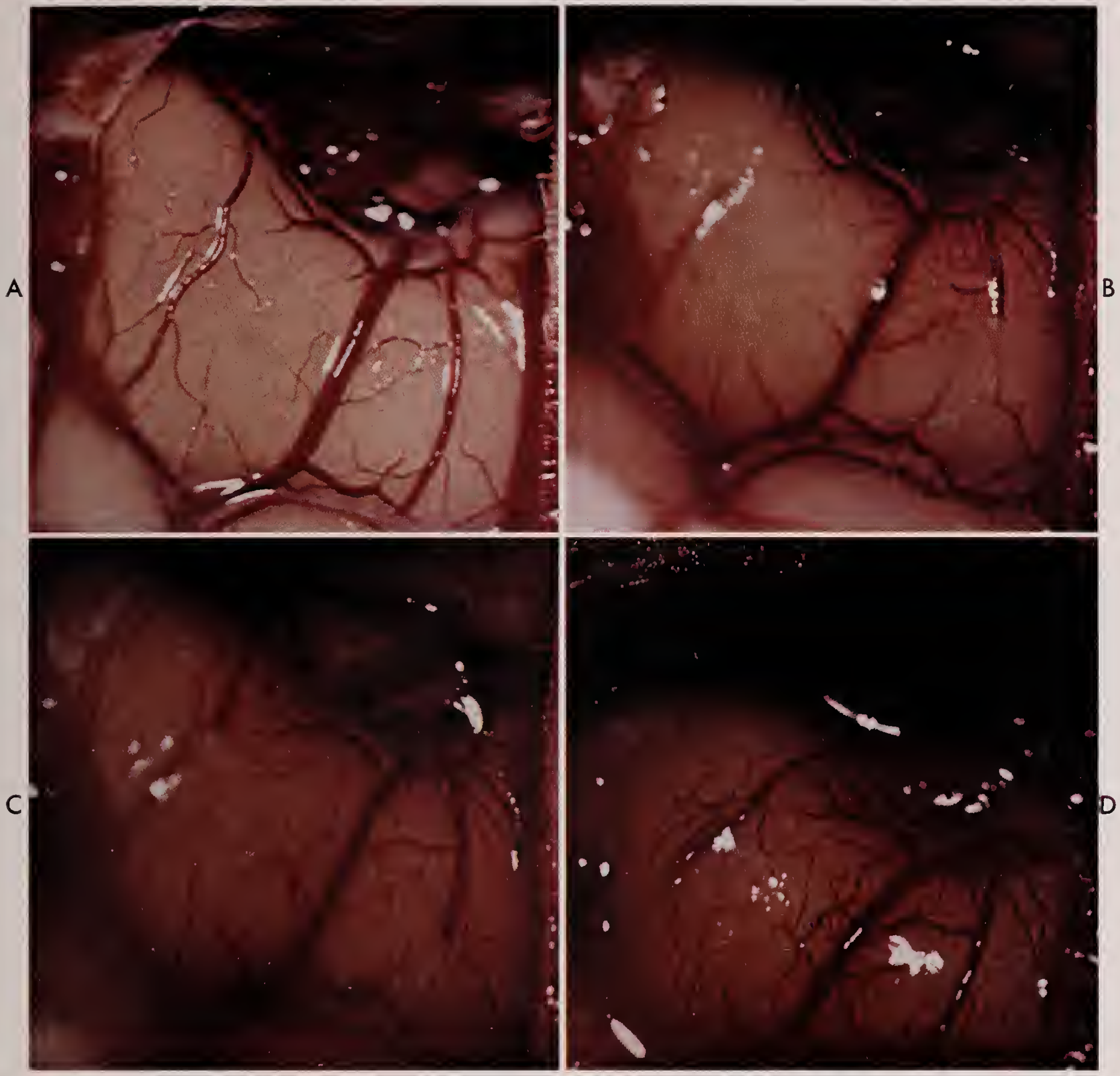
The main interest in the present study was the behavior of air emboli in the brain. Adult cats under deep pentobarbital anesthesia were prepared with tracheostomy, wide craniotomy over the left cerebral hemisphere, immobilized with decamethonium bromide to permit artificial respiration, and carried on a Palmer respiratory pump. The head was secured in a head holder with the animal in the prone position. A continuous EKG monitor was provided with needle electrodes in both forepaws, a Grass preamplifier, and display on an oscilloscope. A binocular dissecting microscope was used to observe the vessels of the exposed cerebral cortex. In the first pilot study, 50 cc of air was injected into a femoral venous cannula. Retrograde air flow from the superior saggital sinus was noted into the large cortical veins feeding into the sinus. Once a air-blood interface was observed in a vein, there was no evidence of resumed blood flow in the normal direction. No change was observed when the body axis was raised to 60 degree head down position. Prompt tachycardia developed with augmentation of T waves. Cortical cyanosis and absent EKG response were noted six minutes following injection. This technique was not felt to mimic the development of divers' air embolus adequately, so a different experimental design was undertaken.

diving accidents simulated

Studies were made in six adult cats. They were prepared as above except a four-way tracheotomy cannula was used. The trachea was securely tied around one branch of the cannula. Two branches went to the input and output hoses of the Palmer respiration pump. The fourth branch went to a Y tube connected to an aneroid manometer and a stopcock which was connected to a hand pressure syringe. Provision was made for closing the hoses to the respiration pump.

A control period was established during which the animal was maintained on a stroke volume of 50 cc and a pump rate of 17 per minute. Baseline EKG rate and brain appearance were noted (Fig. A). The hoses from the respiration pump were shut off and air was pumped into the trachea with the hand pressure syringe.

It was found that approximately one additional vital capacity produced an overpressure



A. Normal appearance of the ectorylvian gyrus of the adult cat. The gyrus is transversed by a cortical vein flanked by two small cortical arteries.

B. One minute following the induction of air emboli; moderate swelling is evident. The artery to the left of the vein is filled with air and a stable air-blood interface is visible in the artery to the right of the vein.

C. Eight minutes following the induction of air embolism and three minutes after raising the body axis 60 degrees, the air-blood interfaces begin to move in the direction of arterial flow (top to bottom).

D. Ten minutes following induction the air emboli have moved out of both arteries and blood circulation has been restored. Note marked vasodilation.

of 20-25 mm mercury. In five of the six animals air emboli were visible within seconds of the time this pressure was reached. In no case was more than 25 mm mercury required to produce emboli. There was usually a bradycardia during the time of lung overpressure.

In all cases the intrapulmonary pressure was returned to atmospheric pressure in less than one minute and effective respiratory exchange again instituted with the respiration pump. The EKG returned to control values. Once air appeared in cortical arteries, no progress of the embolus was observed while the animal remained flat (Fig. B). No air was observed in cortical veins. Arterial pulsation of the air-blood interface was observed. One animal developed massive pneumothorax but did not develop air emboli.

effect of changing position

After an initial observation period of approximately five minutes, during which the stability of the air-blood interface in cortical vessels was observed, the animal was tipped head down with the long axis of the body at 30-60 degree angle. Brain swelling, which had been present following the development of air emboli, became somewhat more pronounced. Marked engorgement of cortical pial veins and venules occurred and blood began to displace the air in the small arteries under observation (Fig. C). Flow through adjacent arteries not containing air emboli underwent no visible change. No air was observed in the veins draining the gyri being fed by air-containing arteries. After blood flow had been established, marked dilation of the small arteries was observed even when the animal was returned to a horizontal position.

Four of the five animals with visible emboli were observed for periods of approximately thirty minutes, during which no further changes in the pattern of blood flow or EKG occured. No emboli appeared after the initial shower. Brain swelling was less marked at the end of this period. The scalp of the fifth animal was closed and dial-urethane anesthesia instituted. No change in EKG or cortical appearance was noted fourteen hours later.

Post mortem examination of the animals demonstrating emboli revealed marked patchy interstitial hemorrhages in both lungs. No air or foam was found in the great vessels, the chambers of the heart, or the coronary arteries. Small pettichial hemorrhages were noted on the brain surface in three cases.

discussion

Using appearance of air in the cerebral vessels as an end point, there does not seem to be enough air in the circulation to impair cardiac filling through foaming. Experimental air emboli, produced by pulmonary air overpressure, appear on the arterial side of the cerebral vasculature and lodge in small arteries.

The following tentative mechanism of the above phenomena is proposed. The point in the branching of the vascular tree at which air lodges is probably determined by the surface tension properties of the air-blood interface within the lumen of the vessel. When arterial pressure is no longer able to move the interface along the vessel walls of diminishing caliber into the capillary bed, stasis results with infarction and the production of neurologic symptoms. Increase in venous pressure through use of the hydrostatic pressure of the venous blood column dilates the venous side of the drainage system and the capillary bed. This allows a more favorable ratio between the circumference of the air-blood interface which tends to be secured to the vessel wall as a result of surface tension differences, and the cross sectional area of the vessel available for arterial pressure which tends to move the interface along the vessel. Once air gets into the venous side of the cerebral circulation it has not been observed to reappear. The volume trapped in these critical vessels is probably quite small.

Arterial pressure was not monitored in these experiments, and further studies may reveal that the Trendelenberg position ("shock position") restores venous filling to the heart, which is probably interrupted during the period of lung overpressure. Regardless of the mechanism, this position produces movement of emboli out of the cortical arteries and restores blood circulation.

In view of the serious consequence of the neurologic manifestations of air embolism, the supine Trendelenberg position might be considered as a first aid measure until recompression can be accomplished. The supine position seems preferable to the prone position if emboli are to be kept out of the aortic branches supplying the spinal cord. If circulation cannot be promptly established, irreversible brain damage would probably result before transportation to a remote recompression facility could be effected. ■

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Cancer Registries in Hospitals

DAVID METHENY, M.D. Seattle, Washington

For forty years, cancer has been the second most frequent cause of death in the State of Washington, as it has been elsewhere. About one in seven of the people who read this article will likely die of cancer. Others who will have the disease will have proper treatment soon enough to survive it.

Control of cancer within any community depends on many factors. Lay medical intelligence, stimulated by adequate public information in an area, is one factor. The existence of proper facilities is another, and this means hospitals properly equipped and staffed by physicians sufficiently interested in the problem.

other areas lead

During the last few years, more and more hospital cancer registries have been developing. California and Connecticut have had hospital cancer registries, as part of their over-all programs, for many years. Pennsylvania, Texas, Michigan, Virginia, Ohio, Oregon, the District of Columbia, and Florida have many hospitals with tumor registries. These registries have been encouraged by the states' cancer coordinating committees or their equivalents. There are likely many additional hospital cancer registries that I do not know of.

abstract

DAVID METHENY (Cancer Coordinating Committee, Washington State Medical Association, Seattle, USA) Cancer Registeries in Hospitals, Northwest Med. 62:703-704 (Sept) 1963.

The average general hospital will get about one cancer patient per year per bed. A cancer registry, operated through cooperation of staff, management, and record library, enables staff to check results of cancer therapy. Knowledge of results is the foundation for improvement. Further information may be obtained from the Cancer Coordinating Committee, Washington State Medical Association; and guides from the American College of Surgeons.

abstracto

DAVID METHENY (Cancer Coordinating Committee, Washington State Medical Association, Seattle, USA) Cancer Registeries in Hospitals, Northwest Med. 62:703-704 (Sept) 1963.

Un hospital general tiene un promedio de un paciente con cáncer por año y por cama. Un registro de cáncer operado con la cooperación del cuerpo medical y administrativo permite evaluar los resultados de canceroterapia. Este conocimiento es la base para el propreso. Patrones para el estblecimiento de estos registros se obtienen a través del Colegio Americano de Cirujanos o del Comité Coordinador de Cáncer, de la Assocíación Médica del Estado de Washington.

Dr. Metheny is chairman of the Cancer Coordinating Committee, Washington State Medical Association.

To be effective, a hospital cancer registry requires cooperation of hospital management, the hospital record librarian, and the medical staff. It takes about a half hour of a librarian's time to make the initial registration for one patient from the hospital records, and about a quarter hour for each periodic follow-up. Each of these processes also requires about 180 seconds of the cooperating doctor's time. Then there must be an active cancer committee, or chairman, who will occasionally advise the librarian and will see that the hospital staff gets the information on how well they are doing.

The practical results depend on circumstances. For example, in Calhoun County, Michigan, five small hospitals started individual cancer registries and decided to pool their data. They found that they seemed to be getting reasonable results with most cancers, except those of the head and neck. They advertised and brought into their community a specialist for cancer of the head and neck.

The average general hospital will get about one cancer patient a year for each bed it maintains. From a statistical standpoint, it may be of questionable worth for hospitals with less than 100 beds to institute cancer registries. However, I know of a hospital of about 60 beds in one community where the librarian kept a registry on her own initiative, with punch cards that she developed herself. In a large hospital that had just started its cancer registry, the staff was much surprised to find that within the year 284 of their cancer patients had not survived. *Knowledge of results is the foundation upon which improvements must be developed.*

existing registries

The State of Washington has nine hospital cancer registries approved by the American College of Surgeons. The Cancer Coordinating Committee of the state sponsored a symposium meeting of these registries. The chairmen of the various hospitals' cancer committees, the librarians, and a representative of the administration of each hospital were present. Surprising differences in procedures were found. A number of registry directors were trying to keep unnecessarily complete and detailed records. If the registry is made reasonably simple, it is possible to put the information on IBM cards, which can be processed in moments to provide any information asked for by the hospital committee. If the setup is too cumbersome, this information does not get to the hospital staff, and the purpose of the registry is defeated.

A subcommittee of the Washington State Cancer Coordinating Committee has recently found that this state has another 25 hospitals now starting, or planning to start, local hospital cancer registries. Those interested should write to the American College of Surgeons for "Requirements for an Approved Hospital Registry." They should also write to the Chairman of the Cancer Coordinating Committee, Washington State Medical Association, 1309 Seventh Avenue, Seattle 1. Hopefully within the coming year, this committee expects to sponsor a workshop for personnel from new and prospective hospital cancer registries. It is hoped that experiences with registries which have been operating on approved lines will assist the new registries to become effective with least effort.

One last word: There are many kinds of cancer or tumor registries, some of which are established for specific, limited purposes. For example, the University of Washington had a registry several years ago which was instituted only to provide tumor slides for teaching purposes in the medical school. It was financed for that purpose, and after it had accomplished its objective it was discontinued. Still another kind is the state-wide or epidemiologic registry, of which Connecticut's is an outstanding example. These are not what the Washington Cancer Coordinating Committee has in mind. We are simply interested in encouraging an adequate local interest to develop as many local hospital cancer registries as are needed to improve the results of cancer treatment in the various communities. The road signs must be plain so that the runner can tell if he's getting anywhere. ■

233 Stimson Building (1)

Head Injuries

ELDON L. FOLTZ, M.D. Seattle, Washington

Head injury is the most common cause of death in the trauma resulting from car accidents today. As a term, head injury includes injury to the brain as well as to the structures surrounding it, including the scalp, skull, and the brain covering or dura. I should like to cover the topic of brain injury in this rather broad field of head injuries, touching only briefly on injuries of the scalp and skull.

Treatment of severe scalp injuries is not necessarily limited to the realm of neurosurgery. Basic principles of wound treatment hold, here as

abstract

Eldon Foltz (University Hospital, Seattle, Washington, USA) Head Injury, Northwest Med 62: 705-715 (Sept) 1963.

Greatest needs in prevention of head injury are safer automobiles and enforcement of regulations against driving while under influence of alcohol. Brain damage following head injury is usually due to difference in rate of acceleration (or deceleration) of skull and brain following application of force. The brain, being semi-gelatinous, behaves like a bowl of jelly; pressure increases in the region of the blow and decreases at an opposite point. Concussion may occur without demonstrable brain damage. It is characterized by transient unconsciousness and retrograde amnesia. It is due to temporary non-function of the reticular activating system of the central brain stem. Experiments indicate that artificial respiration might be life-saving in some cases because respiratory effort after concussion may be reduced severely. Contusion may be present with concussion and must be diagnosed when red cells are found in the spinal fluid. Experiments indicate that the phenomenon of the lucid interval may be due to acetylcholine released from damaged brain tissue. Atropine is useful but a more powerful drug is needed.

Intracranial pressure may be increased by brain swelling or by hemorrhage. Herniation of the uncus, the result of increased pressure, may endanger the patient's life from brain stem compression. Manitol or urea, intravenously, may reduce swelling by causing diuresis. Twist drill craniotomy, under local anesthesia, is a valuable method of rapid diagnosis of bleeding and may be used to drain some liquified hematomata but it is primarily a diagnostic tool.

abstracto

Eldon Foltz (University Hospital, Seattle, Washington, USA) Head Injury, Northwest Med 62: 705-715 (Sept) 1963.

Los factores mas importantes la prevención de lesiones craniofaciales son: vehículos mas seguros y sanciones contra choferes bajo la influencia de alcohol. Lesiones cerebrales a menudo son debidas a la diferencia entre la aceleración (o deceleración) y el impacto. El cráneo teniendo una consistencia semi-gelatinosa se comporta como un vaso con palea, la presión aumenta en el punto da impacto y disminuye en el punto opuesto. Concusión puede ocurrir sin lesiones anatomicas demonstrables. Los síntomas son inconsciencia momentárea y amnesia retrógrada y se debe a la disfunción del sístema reticular (bulbo requídeo). Experimentos indican que respiración artificial puede ser medida heroica en algunos casos ya que el centro respiratorio puede haber sido temporalmente lesionado. Signo de contusión es la presencia de eritrocitros en el fluido raquídeo. Experimentos también muestran que el fenómeno del intervalo lúcido puede deberse a la liberación de acetilcolina del tejido lesionado. La atropina puede se eficáz, pero una droga mas fuerte puede ser necesaria.

El aumento de la presión intracranial puede deberse a edema o hemorragia. Herniación gancho del hipocampo como resultado del aumento de la presion pone en peligro la vida del paciente por compresión medular. Manitol o urea intravenosos, disminuyen el edema causando liresis. Craniotomía (twist-drill) bajo anestesia local es un método valuable para el diagnóstico de hemorragia y sirve también para la evacuación de líquido o sangre de los hematomas.

This discussion was presented at the Symposium on Trauma at the University of Washington School of Medicine on May 23, 24. It could not be published with the other material from the Symposium in the August issue because of lack of space.

elsewhere. They are: shock prevention or treatment, thorough and prompt hemostasis, adequate debridement and thorough closure.

Open wounds, including scalp lacerations and depressed skull fractures with or without brain laceration which may or may not be immediately obvious as to their extent, can be clarified promptly by adequate x-ray examination. Immediate surgical treatment is mandatory but it is relatively standardized and understood by most physicians who see such injuries. I do not propose to cover either of these categories in detail but will limit my comments to brain injuries since they have great significance in the long-term functioning capacity of the individual.

prevention

Prevention of brain injuries from car accidents is of great concern to the discipline of neurosurgery generally. Active efforts have been under way since 1954 and 1955 to influence car manufacturers in developing safer automobiles. This was instituted, as far as I know, by Hunter Sheldon in Pasadena who catalyzed the effort and contacted the major automobile manufacturers in an effort to modify automobile designs so safety would be emphasized. A modicum of success resulted in 1956 when some of the major manufacturers, Ford Motor Company in particular, came out with safety features: the cupped steering wheel, padded dash, padded visors, hinged rear vision mirrors and seat belts. The trend was slowed considerably by public rejection of these safety features, but recently gained an upsurge when the general public and others took a hard second look at traffic fatalities and their causes.

The car design which could prevent head injuries was popularized several years ago in the so-called Cornell-Liberty safety car (Fig. 1) which was designed to afford maximum protection to passengers during a crash. It demonstrates safety features not found currently in our automobiles, but which would theoretically make the passenger much safer than he is at present. There are accordian doors for easy entrance and exit but providing stability and freedom from doors flying open subsequent to car body distortion during a crash. The bucket seats are heavily padded and are equipped with seat belts and shoulder straps. The car is steered by a bar, eliminating the steering post and wheel upon which chests and heads are being bashed consistently today. The driver's seat is in the middle of the car. A roll bar, extending from frame to roof, is heavy enough to permit the car to roll down a mountainside without crushing the occupants. The car is practically surrounded with huge, heavy fenders giving it a tank-like appearance but capable of absorbing severe crash forces without transferring damaging energy to riders. A person could go through an accident of some magnitude in this type of car or stay in it during multiple rollover, and have a reasonable chance of survival.

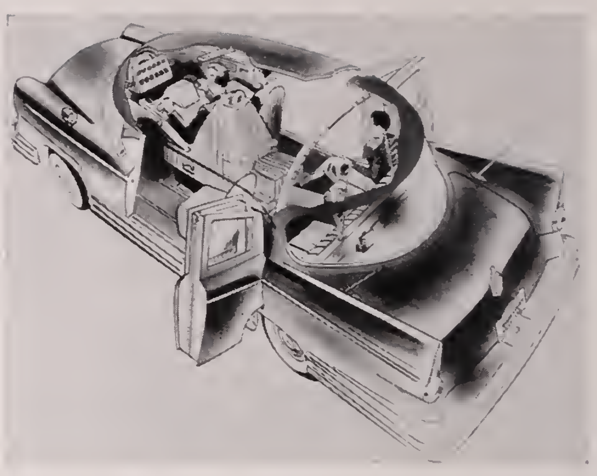

Fig. 1. "Cornell—Liberty Safety Car" which demonstrates maximum passenger protection features in case of collision. The pilot model of this car, built by the Liberty Mutual Insurance Company, is now in the Smithsonian Institution, Washington, D.C.

A second factor which might be given some attention in the prophylaxis of head injuries was depicted not long ago in a cartoon published by the *Wall Street Journal*. A man, seated on a bar stool had a glass in hand and elbow well bent. I suppose it could be assumed that he was feeling no pain but the artist made it clear that he was in no danger of driving his car. He was secured to the bar stool by a seat belt! However, the bar stool immediately adjacent to him was empty, with the seat belt empty. One might wonder if seat belts on bar stools to keep the bar pidgeons at the bar while they drink and until the effects of the alcohol has worn off, would be a good idea. As you all are aware, alcohol in automobile accidents is a significant factor and stringent rules and enforcement concerning driving under the effects of alcohol need more aggressive attention.

Further education of the general populus concerning methods of preventing automobile accidents certainly is needed and this aspect of prevention has advanced greatly in the last four to five years.

effect of differential acceleration

Treatment of brain injury in the acute phase requires some understanding of the mechanism and pathophysiology involved in its production. Figure 2 demonstrates how the force of a blow to the head is transmitted to the brain. The force of the blow, whether it is delivered on the occipital portion of the skull, or the frontal or temporal regions, accelerates the skull more rapidly than it does the underlying, semi-gelatinous brain. Because of this difference in acceleration, there is an area of the brain opposite the blow which suffers a certain amount of decreased pressure. There is, on the other hand, increased pressure on the brain immediately underlying or closest to the accelerating force. This may produce contusion and bruising of the brain close to the site of the accelerative force. Experimental work indicates that unconsciousness and coma may well be directly related to the degree of pressure increase which occurs intracranially at the moment of impact.

It should be kept in mind that the differential movement of the skull and brain may rupture some of the veins running from the brain to the dural sinuses which are closely adherent to the skull. These veins traverse the subarachnoid space. They may be ruptured or torn, producing acute subdural hematoma and even hemorrhage on the surface of the brain.

The entire brain mass contained within the calvarium acts somewhat in the manner of a bowl of jelly at the time of impact, since the brain is semi-gelatinous in consistency. The degree to which brain motion actually occurs within the skull at the time of a severe head blow is surprising. During the war, Sheldon and Pudenz demonstrated this very effectively when they replaced the calvarium of monkeys with a plastic calvarium through which one could actually see the surface convolutions of the brain. High speed color movies were taken of the brain and demonstrated very effectively the striking rotational and shearing forces at the time of impact which caused the brain to "shake like a bowl full of jelly."

The forces which produce this effect are in part dependent on the area of the skull to which the blow is delivered, but the bony and fibrous buttresses within the skull attempt to maintain the brain in its normal position. As a result, these buttresses, particularly the greater wing of the sphenoid which divides the frontal fossa from the middle fossa, and the tentorium cerebelli which divides the middle fossa from the posterior fossa, act as restraining forces; and it is the areas of the brain directly apposed to these buttresses which become bruised and contused most frequently in closed head injuries. The areas of the brain frequently bruised by these effects are the orbital cortex of the frontal lobe, the medial temporal lobe, and the brain stem which may be battered by the floor of the skull, or clivus.

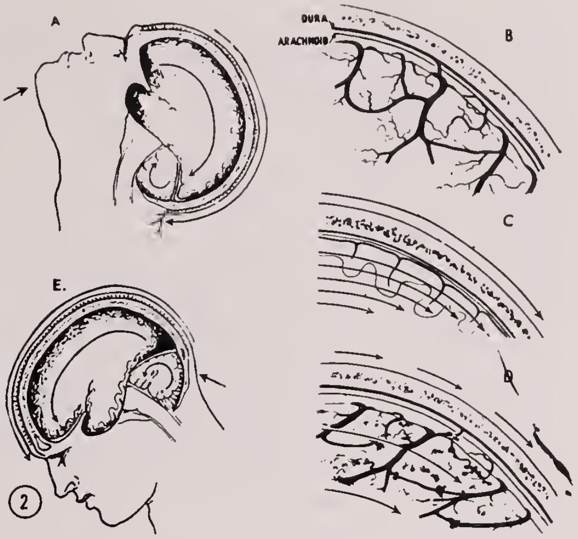

Fig. 2. Diagramatic representation of delayed force transmission from skull to brain, and shear forces in: A, blow to chin; C, D, resulting progressive deformity of brain relative to skull; E, blow to occiput. B, anatomic relationship of skull, dura veins, and brain surface.

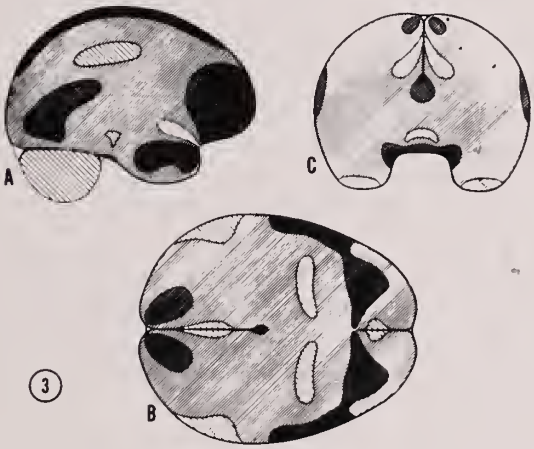

Fig. 3. Shear strains effective in producing brain lesions (by gelatin model technique) in: A, blow to occiput (lateral view); B, blow to temple (vertex view); C, blow to chin (coronal section). Black area equals maximum injury site. Heavy diagonal areas equal moderate injury site. Wide diagonal areas equal minimal injury site.

Shear strains have been investigated by gelatin models. The findings support this idea giving a clearer concept of the physical basis for bruising and contusions than the older one of *contrecoup* injury, (Fig. 3).

concussion

In many head injuries, however, actual contusion or bruising of the brain does not occur but there is immediate loss of consciousness. In the strict sense of the term, cerebral concussion means sudden loss of consciousness secondary to a head blow but unassociated with any demonstrable gross brain damage. Cerebral concussion is always associated with transient loss of consciousness and this means that invariably a small degree of retrograde amnesia is also present.

It is the responsibility of the physician caring for a person who has had a head injury to determine, by adroit questioning, whether or not the patient actually has had a cerebral concussion. It is not unusual for a person to deny unconsciousness, if the unconscious episode was very short. However, there is evidence, on close questioning, that the patient is somewhat confused and actually doesn't know precisely what happened to him except as he has been told by others. He may have acted in an automatic manner immediately after the accident and may even have answered questions reasonably well, and yet he was not a responsible person (for interrogation by a lawyer, for instance) while he was in this condition. It is important that the physician caring for him during this time recognize this fact.

Diagnosis of cerebral concussion can be made if the evidence supports retrograde amnesia of any significant degree. It is likely that this amnesia will be permanent, since the concussion wipes out the last few elements of memory which were being implanted in his memory circuits just prior to the accident. How much memory loss there will be following the accident will, of course, depend on severity of the concussion and duration of unconsciousness.

the reticular activating system

Figure 4 demonstrates the cerebral system responsible for maintenance of consciousness and the wakening state. The reticular activating system is a highly important portion of the central brain stem, extending from the medulla to high diencephalic and thalmic levels as demonstrated in the illustration. This centrally located neuronal core is loosely inter-connected anatomically by long fiber pathways and receives sensory input coming from all sensory systems, including exteroceptive sensations, position sensations and all the sensations which come in over the cranial nerves. This system interacts closely with the thalamus and cerebral cortex to maintain the awake state, and it appears from experimental work, that it is this particular activating system which is inactivated, in a head injury, to produce unconsciousness.

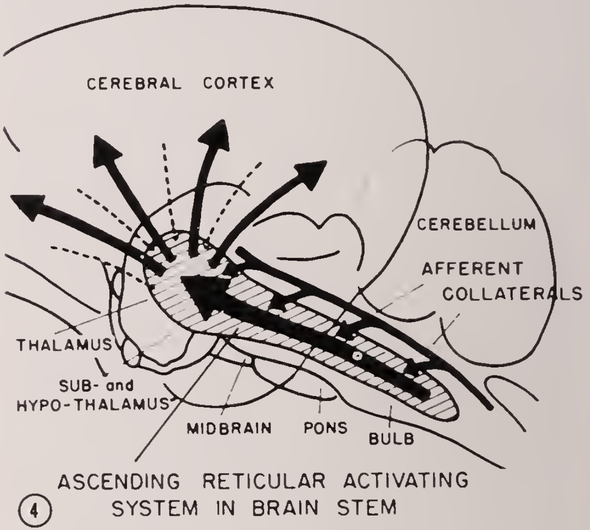

Fig. 4. Diagramatic representation of ascending reticular activating system in brain stem (cat).

The brain stem is in close opposition to the floor of the skull—the clivus—and is easily damaged by blows to the head because of this physical factor plus the additional factor that is more closely supported by structures such as the tentorium cerebelli. The cerebral mass above may tend to rotate on the brain stem, producing severe torsion and shear stresses.

The unconsciousness of cerebral concussion may be related directly to the rapidity with which high intracranial pressure is produced by the blow, or it may be directly related to the acceleration effects of the blow, either in a positive or negative way. Experimentally, cerebral concussion has been related to critical acceleration forces in the realm of 28 feet per second per second, but recent experimental work may support the idea that it is, in actual fact, the rapidity with which high intracranial pressure is produced that is critical in producing cerebral concussion.

experimental concussion

Acute concussion is seldom observed clinically, usually because the doctor is not present when the victim receives a head blow of sufficient force to knock him out. Nevertheless, the acute effects of cerebral concussion need to be understood if the after-effects are to be evaluated properly. This has been investigated rather extensively in our own laboratories. Figure 5 demonstrates a compressed air gun which was used in the laboratory to produce cerebral concussion in monkeys by accelerating the head of the monkey through the critical rate of 28 feet per second per second. The animals were observed carefully during the concussion. Electroencephalograms of the brain surface, as well as electrical activity in the reticular formation, were recorded. Parameters of blood pressure, EKG, and respiration were likewise recorded.

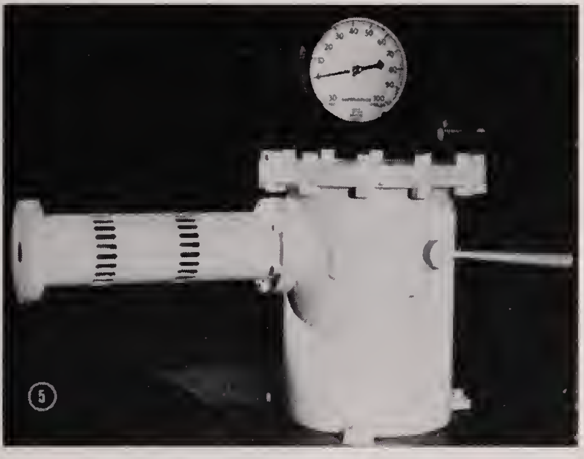

Fig. 5. Compressed air gun designed to produce experimental cerebral concussion by controlled, rapid acceleration. Foltz, Eldon L., Jenkner, F. L., and Ward, A. A., J Neurosurg 10:342-352 (July) 1953. Reproduced by permission.

Clinically, the experimental animal immediately becomes flaccid, respirations stop, and corneal blink and ear reflexes are completely lost. This lasts for a variable period, after which recovery of these basic functions occurs. Figure 6 illustrates a control electroencephalogram on the left with the EKG and respirations recorded in the bottom two channels. The recording on the right side of the figure shows the EEG, pulse rate, and respirations shortly after a concussive blow. The important thing to note is that respiratory effort is practically gone. This is a characteristic finding in cerebral concussion, indicating that brain stem structures have been injured significantly. In the acute phase of cerebral concussion, respiratory arrest is common. The pulse rate is slowed remarkably, as well.

need for artificial respiration

In the clinical sense, application of these facts indicates that primary concern for the patient who has suffered a severe head blow is to observe and aid respiratory efforts if necessary until the brain stem structures can recover and again set up their own respiratory rhythm. Artificial respiration might conceivably be life-saving and, certainly, making sure that the airway is clear for such an effort is highly important. Therefore, at the time of an acute cerebral concussion, the primary concern is maintenance of an open airway and the giving of respiratory aid, if needed.

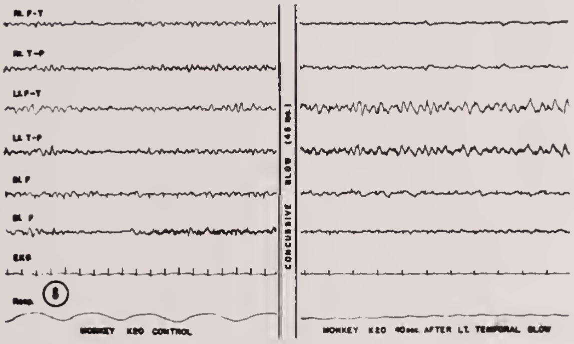

Fig. 6. Scalp EEG record, EKG, and respiration trace to show acute effects of cerebral concussion.

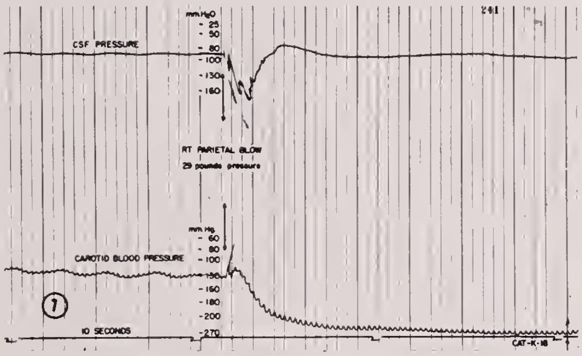

Fig. 7. CSF pressure and blood pressure record at time of cerebral concussion, showing very rapid, transient, CSF pressure rise, but slow, persisting blood pressure rise with bradycardia (cat). Foltz, Eldon L., Jenkner, F. L., and Ward, A. A., J Neurosurg 10:342-352 (July) 1953. Reproduced by permission.

Figure 7 demonstrates what happens to the intracranial pressure during a severe head blow. Again, this is experimental work. The upper trace represents spinal fluid pressure at the time of a right parietal blow. There is some artifact at the time of the blow but it is also quite obvious that the intracranial pressure went up rapidly. A number of artifacts appeared, which may have been secondary to movement, but the pressure very shortly thereafter (within a matter of one or two seconds) was back to normal where it remained. On the contrary, the blood pressure rose to over twice the control level. It is important to point out that not only did the blood pressure go up but the pulse rate declined. It is also important to keep in mind that with this rise in blood pressure there was no change in the spinal fluid pressure. This represents a "pure concussion" unassociated presumably with cerebral contusion. If increased pressure follows a head injury of this sort, it must be assumed that contusion or bruising of the brain has occurred. The spinal fluid under these conditions should show red cells, indicating more than cerebral concussion. The diagnosis must be cerebral contusion since the red cells indicate that bruising has occurred. This does not mean that cerebral concussion has not also occurred, but it does make a diagnosis of cerebral concussion and cerebral contusion mandatory. Under these conditions, increased intracranial pressure may occur but with simple cerebral concussion, increased intracranial pressure is not a problem.

depression of reticular formation

The EEG on an experimental animal in figure 8 shows what happens in the reticular formation. The recording on the upper channels shows the surface recording and in the last EEG channel the recording is from the reticular formation. At the time of the blow there is artifact of recording. It is obvious that within two seconds electrical activity in the cerebral cortex has been reduced, but not nearly as strikingly as that in the reticular formation. At six seconds after the concussion the reticular formation shows very little electrical activity and trace excursions are reduced much more than those in the surface recording EEG. This would imply, of course, that reticular formation function has been damaged more than hemisphere function.

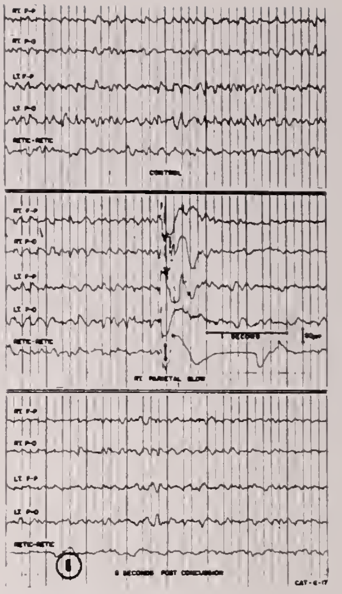

Fig. 8. Scalp and reticular formation EEG at time of concussion. At six seconds, note greater depression of electrical activity in reticular formation. Foltz, Eldon L., Jenkner, F. L., and Ward, A. A., J Neurosurg 10:342-352 (July) 1953. Reproduced by permission.

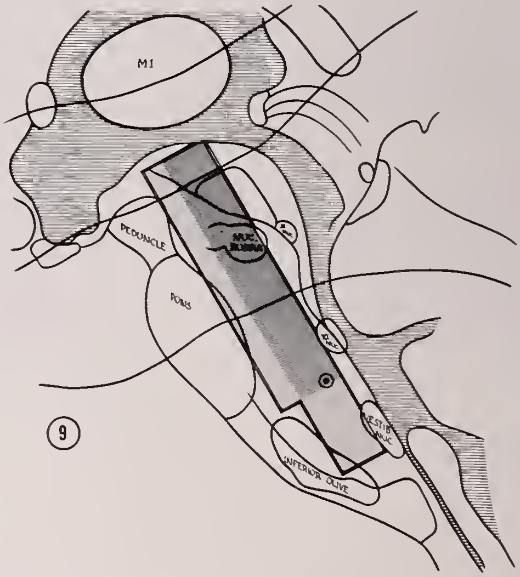

Fig. 9. Diagram, parasagittal section brain stem (monkey). Cross Hatched area shows region where evoked sensory responses in reticular formation were recorded before and after concussion. Foltz, E. L. and Schmidt, R. P., J Neurosurg 13:145-154 (March) 1956. Reproduced by permission.

Further proof of this concept of reticular formation depression in cerebral concussion was elicited by a different technique. Figure 9 is a diagrammatic representation of the area of the brain stem reticular formation which was explored by stereotactically placed electrodes in the primate immediately following cerebral concussion. This area extended from the mesencephalic tegmentum to the upper medulla just above the vestibular nucleus and was achieved by using a grid of four electrodes, recording in a bi-polar manner between these various electrode pairs. The area explored is lightly shaded. The area which gave positive results is heavily shaded. This represents a para-saggital or median-saggital section of the brain, somewhat off the mid-line.

Figure 10 is a cross-section of the brain stem of the monkey showing the pathways of these

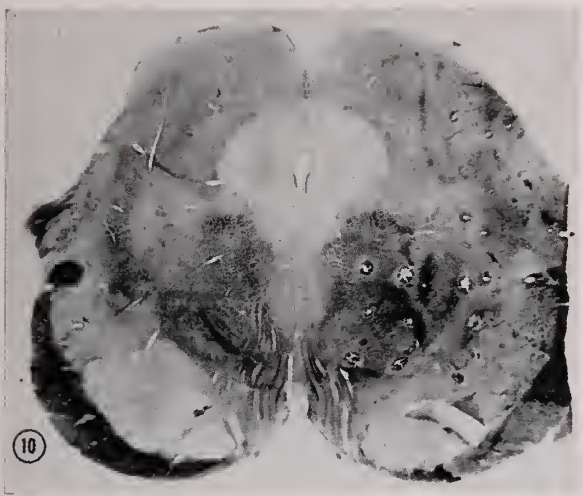

Fig. 10. Cross-section of monkey brain stem at mesencephalon to show 12 stracts of electrode grid whereby evoked responses were recorded; medial 8 electrodes are in reticular formation, and lateral upper 2 are in primary sensory pathways. Foltz, E. L. and Schmidt, R. P., J Neurosurg 13:145-154 (March) 1956. Reproduced by permission.

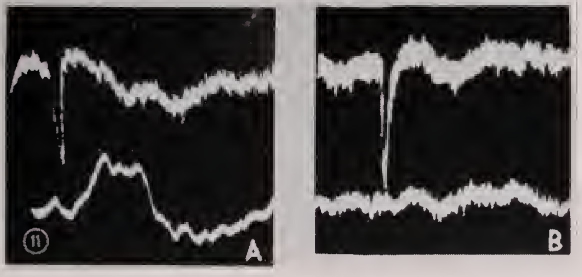

Fig. 11. Oscilloscope tracing of evoked response from sciatic nerve stimulation: upper trace, primary sensory pathway (medial leminiscus); lower trace, reticular formation; A, pre-concussion; B, immediately after concussion. Note absence of evoked response in reticular formation. Foltz, E. L. and Schmidt, R. P., J Neurosurg 13:145-154 (March) 1956. Reproduced by permission.

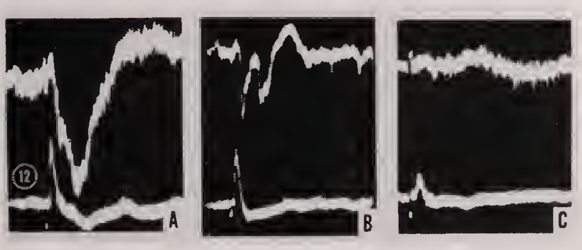

Fig. 12. Oscilloscope tracings as in Figure 11: A, pre-concussion; B, post-concussion (note reduction in both responses); C, four hours post-concussion (note absence of reticular formation and reduction in primary sensory evoked responses) Foltz, E. L. and Schmidt, R. P., J Neurosurg 13:145-154 (March) 1956. Reproduced by permission.

medial electrodes in the reticular formation. The two lateral electrodes traversed the medial lemniscus. The purpose of placing the electrodes was to record evoked responses from the medial reticular formation via the medial electrodes and record evoked sensory potentials in the primary sensory ascending pathways of the medial lemniscus via the laterally placed electrodes. If we could demonstrate that stimulation of the sciatic nerve produced a large sensory response in the medial lemniscus, there should be a delayed slower response in the reticular formation since this sensory input will be transmitted to the reticular formation. It was our intent to study this secondary slow response in the reticular formation immediately after cerebral concussion assuming that there would be changes in the reticular formation activity after concussion if our ideas concerning the damage to the reticular formation in cerebral concussion were correct.

Figure 11 shows the oscilloscope tracings in this experimental work. The primary sensory response from the medial lemniscus is demonstrated as a high potential, relatively short duration response in the control trace in A. The second trace in A demonstrates the polyphasic, long-latency response recorded from the medial reticular formation, a normal type of response, as expected. In B, the primary ascending pathway is still transmitting the response to higher centers ten seconds after a cerebral concussion blow. The reticular formation, on the other hand, shows no evidence of the evoked response such as that present prior to concussion. This implies rather specifically that the sensory input coming from the medial lemniscus or the primary ascending sensory pathways has not activated the reticular formation and, presumably, this is secondary to the cerebral concussion which has just been induced.

the lucid interval

Figure 12 shows the same type of response but demonstrates experimentally a situation which we frequently see clinically. In this instance, over a period of 30 minutes, the reticular formation response has gradually disappeared. This is comparable to reaction of a patient who has received a cerebral concussion, seems to be reasonably alert and responsive when he is first seen in the emergency room, but within an hour or so, begins to show less responsiveness, becomes somewhat disoriented, is drowsy and falls asleep frequently. It appears in this instance, that it is not the physical shake-up of the reticular formation which produced its loss of function, but something which acts more slowly though the initiating factor may have been the cerebral concussion.

This type of response, at the clinical level, has been called a lucid interval and invariably brings up the thought of an epidural hematoma. I should like to emphasize, however, that in our experience the presence of an epidural hematoma under these circumstances is not as common as some of the textbooks might lead one to think. An epidural hematoma should be considered in all instances and the possibility should be thoroughly investigated, but something does happen to the reticular formation which is progressive, which causes progressive changes in the brain over a period of time, and, which may mimic the effects of an epidural hematoma.

vaso-dilation

It has been postulated that this may be a result of acetylcholine which is released into the spinal fluid from damaged brain tissue, recognizing that acetylcholine is not present in normal spinal fluid. Whether the acetylcholine itself causes a loss of integrated activity of the reticular formation or whether it is some substance closely related to acetylcholine is not clear, yet if an anticholinergic drug of a powerful enough nature is used to counteract the acetylcholine, the effect can, at times, dramatically reverse the lethargy and evidences of deterioration in the patient. It is important to emphasize here that acetylcholine is a powerful vaso-dilator, that vaso-dilation has been recognized for years as a part of the pathological picture in brains of persons who died from cerebral concussion, and that vaso-dilation will ultimately produce petechial hemorrhages by diapedesis. If a pathophysiological state of reticular formation depression is caused by the presence of acetylcholine, its presence over a period of time may cause a patho-anatomic change secondary to the hemorrhages which will occur around the blood vessels in the brain stem area of the reticular formation.

The reversal or countering of the acetylcholine effect by large doses of atropine has been practiced in our clinical efforts for a number of years. If used in the proper circumstances, and in time, it can cause dramatic reversal of reticular formation depression, i.e. lightening of the coma and increased responsiveness in the patient. Of course, it must be kept in mind that if bruising and contusion have occurred in the brain stem to cause the reticular formation depression initially, large doses of atropine, as high as 6 mg a day, will not reverse the effects of the pathoanatomic lesion and no change in the clinical status of the patient's coma will ensue. There are contraindications to the use of atropine in these high doses, such as fever and tachycardia, and it should never be used where coronary disease is suspected. Other drugs have been investigated, but as yet, atropine appears to be the best of the group although its peripheral muscarinic action prevents its use in high enough dosage levels to be as effective as we would like.

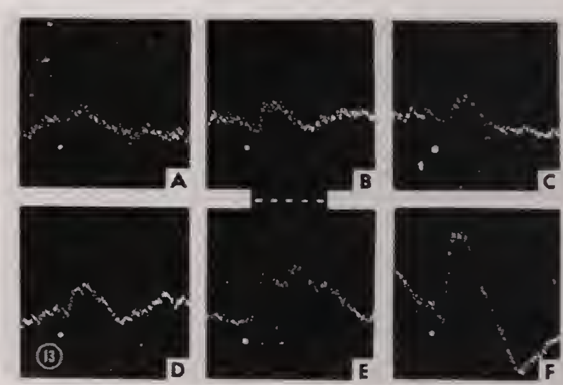

Fig. 13. Twenty-four hour record, by oscilloscope tracings, of reticular-formation-evoked, sensory response recovery following concussion. Foltz, E. L. and Schmidt, R. P., J Neurosurg 13:145-154 (March) 1956. Reproduced by permission.

rate of recovery

Figure 13 illustrates recovery from reticular formation depression in a case of uncomplicated cerebral concussion experimentally produced. In A, five minutes after concussion, the reticular formation response is absent. At B, thirty minutes later, there is an initial response. At C, a little better response is occurring and at D, four hours subsequent to C, response is even better. Finally at E, sixteen hours after injury the response is more nearly normal and at F, twenty-four hours later, it is practically normal. This is the sort of recovery which one could expect in a person who has suffered a significant cerebral concussion with unconsciousness of an hour or so, and the next day appears to be normal neurologically but shows significant post-trauma amnesia as well as retrograde amnesia from the event.

intracranial pressure

Increased intracranial pressure is always a consideration and a danger in any closed head injury. Figure 14 shows the type of cerebral swelling which can occur from a contused brain. The right temporal lobe has been badly contused as demonstrated in this illustration of a coronal section of a human brain. There are a few hemorrhages within the cortex of the orbital surface of the frontal lobe, on the medial surface of the temporal lobe, and on the lateral surface of the temporal lobe. The entire hemisphere is swollen and there is a shift of the brain from right to left as demonstrated by shift of the midline structures. There is marked increase in the mass of cerebral white matter on the right side as compared to that on the left.

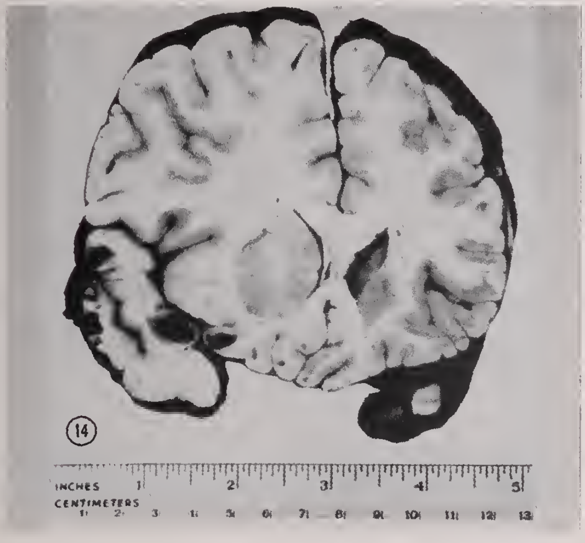

Fig. 14. Coronal brain section in cerebral contusion. Note intracerebral hematoma and swelling of entire right hemisphere.

This is the type of cerebral swelling which can cause significant herniation of the uncus and endanger the patient's life because of upper brain stem compression. At times, a temporal lobe this badly contused will liquify, expand greatly in size, and will have to be removed surgically in order to provide adequate decompression. However, in many instances this type of swelling can be treated rather effectively by one of the recently recommended drugs, either manitol or concentrated urea, given intravenously rather rapidly in the amounts of .5 Gm per kilo. Either of these will produce significant diuresis and cause shrinking of this swollen area. They can relieve early uncal herniation with cocomitant brain stem compression.

hematomata

Figure 15 demonstrates another cause of increased intracranial pressure in closed head injury, the presence of an expanding intracranial hematoma. This illustration shows an epidural hematoma mass, probably arising from a lacerated middle meningeal artery, secondary to a linear skull fracture across the middle meningeal groove. This is one place in which a skull x-ray can be of extreme value in predicting the occurrence of hematoma. Almost without exception, an epidural hematoma in an adult is associated with a skull fracture across the middle meningeal groove. The fracture can be demonstrated by x-ray and should alert one to the possibility of middle meningeal artery bleeding. The hemorrhage commonly produces a brain compressing mass such as this and ultimately causes a brain shift as shown in the illustration.

This mass will likewise cause brain stem compression with uncal herniation. There are other hematomas which can be produced by head injuries, but each will make itself known by the effect of the mass. This includes epidural hematomas, subdural hematomas, and intracerebral hematomas. It must be kept in mind that intracerebral hematomas, in most instances, will produce hemiplegia and possibly aphasia more promptly than the others, but these hematomas are mass lesions and will be localized by the effect on the function of the underlying brain, in addition to causing signs of increased intracranial pressure and uncal herniation.

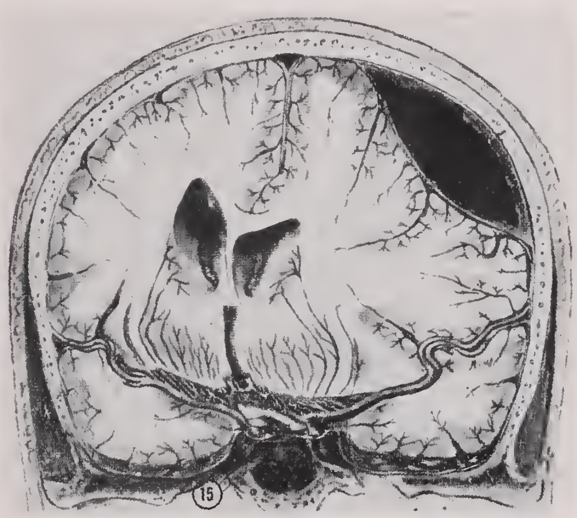

Fig. 15. Diagram to illustrate effects of intracranial hematoma and resulting brain shift.

structures affected by pressure

Figure 16 is a diagrammatic representation of the structures going through the so-called tentorial notch. The tentorium cerebelli surrounds the posterior and lateral aspects of the mesencephalon or upper brain stem which lies just dorsal to the base of the skull, or clivus. The mesencephalic structures demonstrated here are the aqueduct and the surrounding central gray, the third nerve nucleus and exit of the third nerve through the peduncle, the peduncles on both sides carrying the cortical spinal tracts and other out-flow pathways and the superior colliculus. In the central portion of the mesencephalon lies the reticular formation which we have been discussing, intermixed with the cells of the red nucleus. The substantia nigra is present in the area just dorsal to the basis pedunculi bilaterally. The posterior cerebral artery is demonstrated coming up through the notch laterally to supply the visual cortex of the medial posterior hemisphere or occipital lobe.

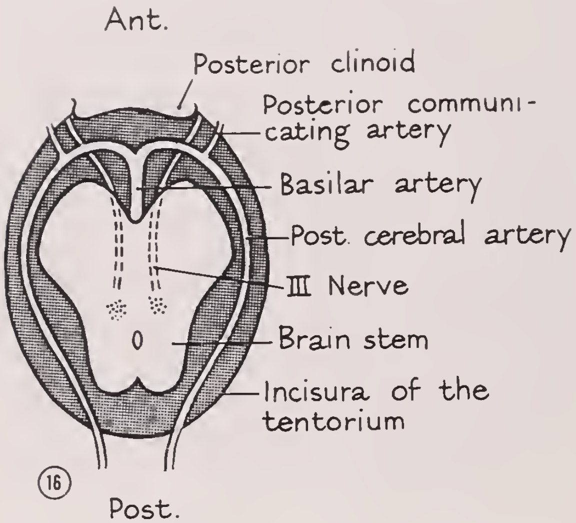

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Fig. 16. Diagramatic scheme of structures passing through the incisureal notch, all of which are compressed in the uncular, transtentorial herniation. White, L. E., Geriatric Surgical Emergencies, Chapter 17, editors Jesseph and Harkins, publisher Little, Brown & Company, 1963. Reproduced by permission.

The uncal gyrus of the medial temporal lobe is located just lateral to the incisura of the tentorium cerebelli, and whenever a space occupying mass is present in the hemisphere on that side, the expansion of this mass produces brain shift of the medial temporal lobe so that the uncal gyrus tends to push down into this space causing compression of the brain stem structures. If the mass is posterior, it may be the hippocampal gyrus which is pushing down into this area, but in either instance there is evidence of brain stem shift with serious implications. As might be obvious, the first thing that happens is impairment of consciousness. The patient may become sleepy, more difficult to awaken, slightly disoriented, and less responsive. This is the first indication that brain stem shift is occurring since the reticular activating system is very sensitive to shift, presumably because blood supply is impaired by the shift.

The second sign in sequence, as a rule, is the enlargement of the homolateral pupil, secondary to compression of the third nerve by the mass pushing through the incisura. The third nerve loses control of the tone of the constrictor fibers in the pupil, first, causing pupillary dilation and poor reaction to light, followed by rather wide dilation of the pupil and extraoccular motor paralysis, including ptosis. This can progress to a complete third nerve palsy on the homolateral side.

The third sign, often almost concomitant with the pupillary changes, is weakness in the contralateral extremities secondary to compression of the peduncle and impairment of its blood supply. There may be sensory loss, likewise, associated with the motor weakness; and this can progress to a complete hemiplegia and hemihypalgesia.

The last sign which appears secondary to the herniation is hemianopsia. It is attributed to compression of the posterior cerebral artery as it comes over the tentorium cerebelli edge on its way to the occipital cortex. Compression of this artery produces an infarct of the occipital cortex resulting in loss of vision in the opposite half of the visual field.

It should be emphasized that as these signs progress, the first sign, that is the change in level of consciousness, will become worse. Consciousness change and disorientation will progress to complete coma. Unless something is done to reverse this status irreversible changes in the vasculature of the reticular formation in the brain stem will occur and permanent disability or death is inevitable. Prompt recognition of this syndrome is extremely important since its recognition mandates prompt action to correct whatever is causing this sort of brain shift and uncal herniation. It must be kept in mind that there are a number of variations of this syndrome but they all include the structures just reviewed.

twist-drill craniotomy

The last figure, figure 17, illustrates a very rapid method of diagnosing causes of intracranial mass lesions with the sort of herniation we have just discussed. The twist drill craniotomy technique is demonstrated as a diagnostic and therapeutic method of treating epidural and subdural hematomas as well as intracerebral hematomas.

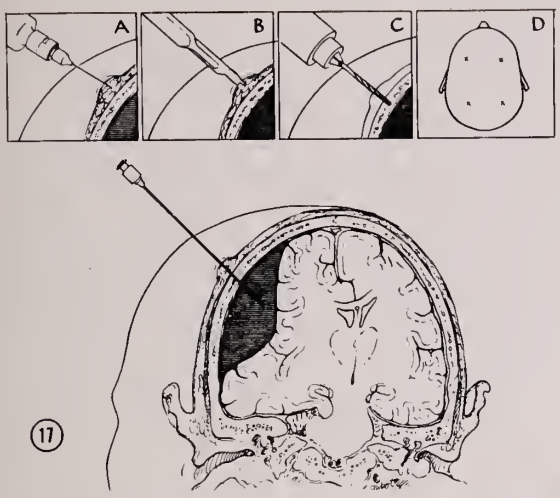

Fig. 17. Diagramatic illustration of twist drill method of diagnosis and treatment of intracranial hematoma. White, L. E., Geriatric Surgical Emergencies, Chapter 17, editors Jesseph and Harkins, publisher Little, Brown & Company, 1963. Reproduced by permission.

This is done under local anesthesia, making a wheal with procaine in the scalp, a stab wound through the scalp to the cranium, and a twist drill hole through the skull and dura. They are usually located in each skull quadrant (Fig. 17-D). A ventricular needle is then introduced through this hole into the space where the hematoma is suspected. Gentle aspiration establishes the diagnosis. A chronic, liquified, subdural hematoma may be drained in this manner. If an acute epidural hematoma is present, however, rapid craniotomy is mandatory. This type of diagnostic procedure can be extremely valuable for use in the emergency room to establish promptly the basis of increased intracranial pressure. It can be used for draining intracerebral hematomata as well as for releasing pressure from the ventricular system. It must be kept in mind that it is not a substitute for adequate decompression, however, and it is used primarily as a rapid diagnostic maneuver.

In conclusion, a few points can be re-emphasized:

1. Cerebral concussion can be difficult to ascertain unless a patient is closely questioned relative to the accident. The presence of any degree of retrograde amnesia is sufficient to establish a diagnosis of cerebral concussion.
2. Cerebral contusion is present whenever spinal fluid pressure is elevated or red cells are present in the spinal fluid after a head injury.
3. Progressive consciousness loss over a period of several hours after a head injury can be associated simply with progressive effects of the concussion and is not necessarily indicative of epidural hematoma. Such hematoma needs to be ruled out rather promptly, however.
4. In acute cerebral concussion, primary concern should be directed toward maintenance of an airway and the use of artificial respiration, if needed. ■

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Current Concepts in the Prevention of Paralytic Poliomyelitis

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Attempts to produce a safe and effective poliovirus vaccine were begun over fifty years ago, after Landsteiner isolated the first poliovirus in 1909. The ultimate development of a formalinized vaccine by Salk, which was field tested in 1954 and marketed in 1955, heralded the end of paralytic poliomyelitis as a major epidemic disease, although problems remained. Most disturbing was the association of paralytic disease with the use of Salk vaccine produced by one manufacturer, shown to be due to incomplete inactivation of the virus particles.

Later, evidence accrued, both in the field and in the laboratory, that many lots of commercially available Salk vaccine did not possess optimal antigenicity, particularly of the type III poliovirus component. These matters, dealt with adequately, it seemed reasonable to assume that with the continued and expanded application, at least 90 per cent of paralytic poliomyelitis might be prevented in the United States. Because inactivated poliovirus vaccine is less than 100 per

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cent effective and because it fails, in a majority of recipients, to prevent inapparent poliovirus infection, it has been agreed by most observers that its use could neither effect total control of the paralytic poliomyelitis problem nor ensure eradication of polioviruses.

It is not surprising, therefore, that during the greatest flurry of activity in application of Salk vaccine to millions of individuals in this country, considerable effort was being directed toward development of safe, effective, live, attenuated poliovirus vaccines which, hopefully, would accomplish these tasks. The strains developed by Sabin were chosen for licensure and, subsequently, more than 50 million persons in the United States have been fed at least one dose of oral vaccine. With completion of projected mass vaccination programs, the figure could conceivably exceed 100 million before the end of 1963.

The Sabin vaccines have had their problems, too. Their association with paralytic disease indistinguishable from poliomyelitis has caused serious questions to be raised concerning their safety. The significant tendency of mass oral immunization programs to reach mainly those

abstract

Ernest A. Ager, Bernard Bucove (Washington State Department of Health, Olympia, USA) Current Concepts in the Prevention of Paralytic Poliomyelitis, Northwest Med 62:715-720 (Sept) 1963.

Following the gradual emergence of paralytic poliomyelitis as a major epidemic disease in the United States 100 or more years ago, the epidemiology of the disease has undergone changes apparently related to the widespread but non-uniform application of inactivated poliovirus vaccine. Among these changes are a dramatic reduction in incidence of the disease, a shift in the age distribution of cases, the shift of a larger proportion of cases to lower socio-economic groups and possibly a shift in the proportion of type I and type III cases.

The development of live, attenuated poliovirus vaccines offers the hope of area-eradication of virulent polioviruses, apparently not possible with killed virus vaccines. The use of type III oral, attenuated poliovirus vaccine has, however, been associated with the development of a number of cases of paralytic disease, mainly in adults. Their risk from type III live vaccine is probably somewhat higher than risk of contracting type III paralytic poliomyelitis naturally. Therefore, it is suggested that those over 30 years not take type III oral vaccine unless previously protected by killed virus vaccine.

Reasonable hope of eliminating virulent polioviruses involves feeding oral vaccines to large numbers of individuals, but they need not be adults. Of greatest concern is continued application to infants. Mass immunization of a community does not solve the problem of eradication. Actually, it is only a beginning.

abstracto

Ernest A. Ager, Bernard Bucove (Washington State Department of Health, Olympia, USA) Current Concepts in the Prevention of Paralytic Poliomyelitis, Northwest Med 62:715-720 (Sept) 1963.

Concomitante al gradual desarrollo de la poliomielitis paralítica como una mayor enfermedad epidémica en los Estados Unidos de 100 años a la fecha, la epidemiología de esta enfermedad ha sufrido algunos cambios. Unos de los mas recientes parecen ser relacionados al difuso, más no uniforme uso de la vacuna con poliovirus inactivado. Se ha visto, una dramática reducción en la incidencia, cambios en la distribución por edades y a grupos socio-economicos mas bajos y posiblemente cambio en la proporción de casos de tipo I a tipo III.

La vacuna de poliovirus atenuado ofrece la posibilidad de erradicar las formas virulentas lo cual aparentemente no es posible con vacunas que contienen el virus muerto. Sin embargo, el uso da la vacuna oral de tipo III atenuado ha causado un número de casos de polio paralítica, especialmente en adultos. El riesgo de esta eventualidad es tal vez un poco mas alto que el riesgo de contraer poliomielitis puralítica de tipo III por medios naturales. Por lo tanto se recomienda que personas de más de 30 años no tomen la vacuna oral, a menos que esten protegidos de antemano con vacuna Salk.

La posibilidad de eliminar poliovíruses virulentos implica el uso de vacunas orales en gran número de personas, aunque éstas no tienen que ser adultos. De la mayor importancia es la administración de ésta vacuna a niños. La inmunización masiva en la comunidad no resuelve totalmente el problema de la erradicación, más seguramente es un buen comienzo.

individuals already well protected with Salk vaccine while failing to reach many who have a totally negative vaccination history, although expected, is to be regarded with concern. *The possibility exists that mass oral immunization programs, if not followed by routine programs of vaccine application to infants, will lead to development of a large reservoir of young susceptibles within a few short years.*

It is the purpose of this paper to consider poliomyelitis vaccines in perspective, in relation to the ecology of virulent polioviruses, and in the framework of our knowledge of the epidemiology of the disease itself.

the pre-Salk era

Following emergence of paralytic poliomyelitis as a major epidemic disease during the past 100 or more years in this country, there occurred an interesting shift in the age distribution of cases away from the infantile paralysis pattern to a pattern of greater involvement of older persons. The highest attack rates were shifted to school age persons, and an alarming number of young adults became affected, often with unusually severe disease.

A simple explanation has been advanced that the risk of paralysis and its severity are closely related to age at the time of infection, and that the average age of infection has been significantly raised as result of an improved standard of living with its hygienic advantages. In certain countries in which fecal-oral transmission of enteroviruses is greatly facilitated by crowding and lack of sanitation, there is serologic evidence that poliovirus infection with all three types occurs generally at a very early age, paralytic disease is rare, and epidemic poliomyelitis is unknown.

effect of Salk vaccine

Intensive application of Salk vaccine has altered the epidemiologic features of paralytic poliomyelitis significantly. Most obvious is the reduction in incidence of the disease, (Table 1). The case rate reached one hundred thirty-six per million population in 1952, the year of highest known incidence. By 1962 the rate had been reduced to less than four cases per million population.

Inequities in distribution of Salk vaccine have been responsible for another shift in the age distribution of cases, causing a larger proportion of the case load (now very much reduced) to appear once again in the very young, with a second and much smaller peak in the adult age groups. What has happened, in fact, is that control of the disease has been far more successful in school age populations than in pre-school and adult groups. In table 2 it can be seen that 0-4 age group contributed nearly one-half of the total cases in 1962, and that this age group was less adequately immunized than the group of older children who experienced the highest case rates immediately prior to Salk vaccine use.

Table 1
Incidence of Paralytic Poliomyelitis
in the United States, 1951-62

Year	Number of Cases	Case Rate per 1,000,000
1951	10,037	65.4
1952	21,269	136.0
1953	15,648	98.4
1954	18,308	113.1
*1955	13,850	83.9
1956	7,911	47.1
1957	2,499	14.6
1958	3,697	21.2
1959	6,289	35.5
1960	2,525	14.0
1961	988	5.4
1962	683**	3.7

* Salk vaccine introduced commercially.
** Final 1962 figure based on 60 day follow-up data.

Table 2
Salk Vaccine Immunization Status and Incidence of Paralytic Poliomyelitis by Age Group, United States, 1962

Age Group	Per cent of Pop. Immunized with 3 or more Doses*	Cases of Paralytic Polio**	Case Rate per 1,000,000***
0- 4	62.3	338	16.7
5- 9	85.8	139	7.3
10-14	86.2	70	3.9
15-19	79.2	26	1.9
20-29	55.0	52	2.3
30-39	44.0	36	1.4
40 & over	23.9	22	0.9
Total	60.1	683	4.8

* Supplement to Communicable Disease Center Poliomyelitis Surveillance Report No. 276, March 29, 1963.
** Communicable Disease Center Poliomyelitis Surveillance Report No. 277, June 7, 1963.
*** Estimated 1961 population, Census Population Reports, Series P-25, No. 246, March 23, 1962.

Another result of non-uniform application of Salk vaccine has been to cause the shift of a larger proportion of total cases to certain lower socio-economic groups. This is clearly related to greater penetration by Salk vaccine programs of the higher socio-economic groups, leaving less fortunate populations to contribute a greater

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Data in the tables were provided by the Poliomyelitis Surveillance Unit, Communicable Disease Center, Atlanta, Georgia.

proportion of the much reduced case load. The occurrence of epidemics with unusually high attack rates in non-white populations in large cities in recent years provides convincing evidence of this shift.

A recent shift in the proportion of cases of paralytic disease due to type I and type III polioviruses may be related to Salk vaccine use. Prior to 1960, type I poliovirus was responsible for approximately 80 to 90 per cent of paralytic cases. The proportion was reduced to approximately 60 per cent in 1961. This tendency for type I virus to be isolated from a smaller proportion of cases of paralytic disease was, however, reversed in 1962 as is shown in table 3. The fact that the median potency of the type III component of a significant proportion of lots of Salk vaccine was below optimal levels in 1957-59 could account for this shift, which in reality then might merely represent the effect of a greater reduction in the incidence of paralytic disease due to type I virus than of that portion due to type III virus. Currently available Salk vaccine is of satisfactory potency for all three virus types.

Table 3

Poliovirus Isolates from Reported Paralytic Cases by Type, 1958-62, United States

	Type 1		Type II		Type III		Totals	
Year	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
1958	846	80.0	28	2.6	185	17.5	1,059	100.0
1959	1,681	89.5	9	0.5	188	10.0	1.878	100.0
1960	547	72.2	1	0.1	210	27.7	758	100.0
1961	211	60.1	5	1.4	135	38.5	351	100.0
1962	309	75.0	7	1.7	96	23.3	412	100.0

Table 4

Estimated Number of Doses of Oral Poliomyelitis Vaccine by Month and Type, United States, 1962

	Number of Doses		
Month	Type 1	Type II	Type III
January	1,142,920	None	None
February	44,550	453,170	None
March	600,633	680,121	None
April	494,656	424,030	915,246
May	5,528,405	265,912	1,674,210
June	2,754,128	332,996	6,082,574
July	1,508,732	1,883,691	1,911,858
August	3,160,500	634,800	243,939
September	9,828,704	1,917,303	1,427,894
October	8,312,438	3,223,803	429,106
November	918,416	8,920,960	97,871
December	1,531,673	2,848,989	141,353
Unknown	1,416,804	409,317	154,693
Totals	37,242,559	21,995,092	13,078,744

properties of oral poliomyelitis vaccines

The type I oral, attenuated poliovirus vaccine developed by Sabin was licensed in this country August 17, 1961. Types II and III, also strains developed in Dr. Sabin's laboratory, were licensed October 10, 1961 and March 27, 1962, respectively. Use of Sabin vaccines offered certain obvious advantages, such as ease of administration and lowered cost. These were not, however, their most valuable attributes in the minds of many; rather, there presented a theoretical possibility of poliovirus eradication from their use, since intestinal immunity was developed in a high percentage of those receiving the vaccines. In addition, the oral vaccines would enjoy a greater public acceptance than an injectable agent, such as Salk vaccine.

Bulk of the oral poliomyelitis vaccine administered in this country, since licensing, has been fed in mass immunization programs. During 1961, an estimated 586,782 doses of type I and 151,400 doses of type II were fed without incident. As shown in table 4, a total of over seventy two million doses were fed in 1962.

During 1962, a total of 65 cases of paralytic poliomyelitis occurred within 30 days of administration of oral poliomyelitis vaccine. Of these, 33 had taken type I vaccine, 7 had taken type II vaccine, and 25 had received type III vaccine. The possibility that oral vaccine might be etiologically related to paralytic disease has received considerable study.

vaccine-induced disease

The probability of casual relationship between oral vaccine feeding and paralytic poliomyelitis is relatively small in some cases, for a variety of reasons. For example, the occurrence of a vaccine-associated case in an epidemic situation, the isolation of poliovirus of a type different from that fed, or the onset of illness within 2 or 3 days of feeding, should be sufficient reason to question seriously the suggestion that the vaccine was etiologically related to paralytic disease. However, in a significant number the association of vaccine and disease is quite compatible with a hypothesis of vaccine causation. In certain others, the available evidence is insufficient for proper evaluation but the possibility cannot be excluded. The argument that not a single case can be proved to be vaccine-induced really begs the question, for there is no procedure or evidence available that could yield proof.

Employing the modified Wecker-McBride tests, vaccine-like polioviruses have been isolated from some cases and wild viruses from others. It is well known that the vaccine virus undergoes changes in the gut which cause it to lose its vaccine-like characteristics during the course of asymptomatic infection and, while providing interesting information, these tests may not be used to *prove* that a vaccine virus was or was not responsible for paralytic disease. The fact is that it would not have been possible to *prove* that a single case was vaccine-induced had there been ten thousand cases following feeding programs, and the only profitable approach to the issue of vaccine-association with paralytic disease would seem necessarily to be based instead upon epidemiologic considerations.

Eleven cases of paralytic disease occurring within 30 days of type III vaccine in 1962 are currently considered by the Surgeon General's Oral Poliomyelitis Vaccine Advisory Committee as compatible with the possibility of vaccine-induction. An additional seven are considered inconclusive. The epidemiologic evidence suggesting that at least some of these 18 cases were vaccine-induced is appreciable. The bulk of type III oral vaccine was fed prior to August 1, in 1962 and hence prior to the peak seasonal incidence of poliomyelitis. Cases presumed to be vaccine-associated thus appeared early in the summer. The much more extensive application of type I oral vaccine occurred, on the other hand, in late summer and fall and, therefore, in the midst of the season of highest incidence of paralytic disease. Vaccine feeding was attended by the appearance of only seven compatible cases and six inconclusive cases. Type II oral vaccine recipients produced no compatible cases and only two inconclusive cases in 1962.

age pattern

The most striking characteristic of type III oral vaccine-associated cases is their pattern of age distribution. If these cases were coincidental and, therefore, not causally related to the vaccine, one would expect them to have a fairly typical age distribution for paralytic disease as reported in this country. Actually, while 50 per cent of the 683 paralytic cases in the United States in 1962 were under 5 years of age, and only 16 per cent were adults, none of the vaccine-associated cases was under 16 years, the oldest was 52 years and the median age was 39 years. They appear, thus, to be representative of a sub-population which has experienced a risk of paralytic disease significantly higher in the older age group than that experienced by the general population.

The level of risk associated with type III oral vaccine feeding has been widely quoted as approximately one per million, regarded by many as acceptable. (The overall incidence of naturally occurring type III paralytic poliomyelitis was about 2 per million in 1961 and 1 per million in 1962.) The risk is acknowledged as higher in those over age 30. Just how high cannot be determined easily, but even a crude estimate would be useful.

Although complete data are not available, it is quite unlikely that more than about 4,000,000 of the 13,000,000 doses of type III oral vaccine fed in 1962 were received by persons in the 30-59 year age group. Since eight of the eleven compatible cases occurred in persons in this age group, the risk in this group appears to have been approximately one case per 500,000. The Salk vaccination status in this age group is less than optimal (see Table 2), but undoubtedly was significantly higher among those who were actually fed oral vaccine. If at least 50 per cent were adequately Salk immunized (three or more doses), a very conservative risk for the inadequately vaccinated person over age 30 can be derived using the knowledge that none of the eight compatible cases over age 30 had received any Salk vaccine prior to their oral vaccine feeding. This becomes eight per 2,000,000 or approximately one per 250,000, which should be contrasted with an overall risk of naturally occurring type III paralytic poliomyelitis in this same age group in 1962 of less than one per 4,000,000 (excluding the vaccine-associated cases) and roughly one in 500,000 for persons unprotected with three or more doses of Salk vaccine.

If any of the compatible cases are, in fact, unrelated to the feeding of type III vaccine, the risk has, of course, been overestimated, but in defense of the estimate it should be pointed out that none of the inconclusive cases has been included in its derivation, the Salk vaccine status of oral vaccinees is probably significantly higher than that estimated for the general population, and no allowance has been made for the very real possibility of under-reporting of vaccine-associated cases.

recommendation

In view of this evidence, it would seem best to suggest that adults, particularly those over age 30, not take type III oral vaccine unless adequately Salk vaccinated. Many observers have felt that the possibility of virus transmission from children to adults, particularly in view of the possibility of increased neurovirulence during replication in the gut, was a deterrent to selective immunization of children. A number of studies have shown that household and community spread is fairly low, except in the lowest socio-economic settings. There was not, however, in such studies the opportunity to measure spread adequately after heavy seeding of an entire community with poliovirus. Age-selective feeding of type III vaccine has been quite limited, but it is reasonable to assume that very large numbers of unvaccinated adults have been exposed to vaccinated children in the past twelve months. Thus far, only two type III household contact cases have been considered compatible. One of these two was an infant.

The most commonly heard arguments favoring mass application of oral vaccines to all age groups are that, 1) it is necessary in order to eradicate polioviruses and, 2) total family participation is needed in order to obtain a favorable turnout of children at immunization clinics. The former assertion may be seriously questioned, since adults contribute essentially nothing at all to the poliovirus reservoir, most of them having been naturally infected and immunized many years previously under natural conditions. The latter argument is valid only after the level of risk in adults fed vaccine has been estimated and deemed acceptable. It is doubtful that many adults would take type III oral vaccine if provided with estimate of risk of paralysis within 30 days after feeding compared with the risk of naturally occurring type III paralytic poliomyelitis. In this situation the decision to literally exchange cases of adult paralysis for the possibility of preventing an undeterminable number of cases in children must necessarily be made on philosophical grounds.

the future

Two potent vaccines are available for poliomyelitis control, and it would seem not only reasonable but highly desirable that the advantages of both be exploited. If oral vaccines are fed in mass immunization programs to persons of all ages a reasonable estimate is that about 150 adults will develop type III vaccine-associated paralysis in the United States, a number greater than the total which resulted from the Cutter incident in 1955. On the other hand, the only reasonable hope of eliminating virulent polioviruses from a community involves the feeding of oral vaccines to large numbers of persons. None of these persons need be adults, however, and the oral immunization of a significant segment of the juvenile population will result in poliovirus elimination whether or not any adults are fed.

The only reason to immunize adults with oral vaccine, then, would be to reduce their own risk of naturally occurring paralytic poliomyelitis, a risk which in the case of type III disease is lower than the risk associated with type III oral immunization. Thus, the continuing and extended administration of Salk vaccine to adults and immunization of children with oral vaccines would appear to constitute the best approach at this time. The oral immunization of adults who have been adequately protected with Salk vaccine should, of course, be advocated.

Perhaps of even greater concern than the problem of oral vaccine safety in adults is the need for the continued application of oral vaccines to infants. Unfortunately, a few physicians have been quoted to have stated that once mass immunization of a community has been completed the problem is ended. Actually, *it has just begun.* Mass feeding will temporarily eliminate polioviruses from a community, and because there will be little opportunity for future born children to achieve natural immunization, these young age groups will be universally susceptible to re-introductions of polioviruses unless they, too, have been immunized. Thus, with the adoption of oral vaccination programs there is an irrevocable commitment to provide these vaccines indefinitely to infants as they enter the population. Ideally, infant immunization will be accomplished routinely in the office of every physician who provides well child care. Even so, there is the risk of the development of serious islands of susceptibles through failure to achieve early immunization, particularly in lower socioeconomic settings. Before the poliomyelitis book is closed isolated outbreaks are almost certain to occur. Some, perhaps, may be quite serious.

Of particular importance, as the incidence of paralytic poliomyelitis continues to decline, is the need for adequate surveillance of paralytic disease of presumed infectious etiology. Prompt reporting and detailed laboratory investigation will be essential to the continued evaluation of poliomyelitis vaccines and to the identification of immunologically deficient populations and threatened outbreaks. ■

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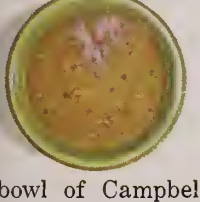

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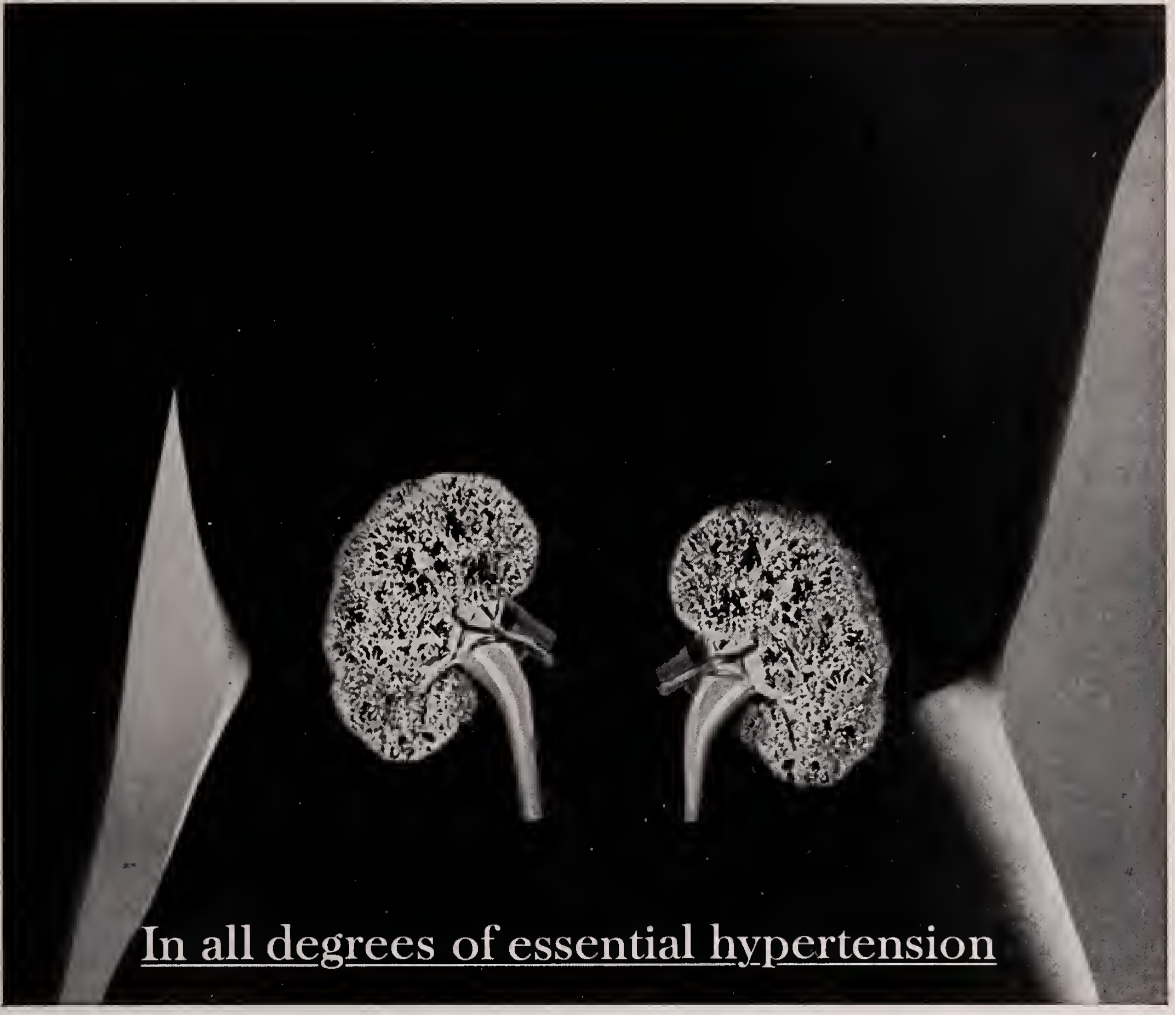
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References: (1) Moyer, J. H., and Heider, C.: Am. J. Cardiol. 9:920 (June) 1962. (2) Brest, A. N., and Moyer, J. H.: Pennsylvania M. J. *63*:545 (Apr.) 1960. (3) Berry, R. L., and Bray, H. P.: J. Am. Geriatrics Soc. *10*:516 (June) 1962. (4) Hutchison, J. C.: Current Therap. Res. *4*:610 (Dec.) 1962. (5) Feldman, L. H.: North Carolina M. J.: *23*:248 (June) 1962.

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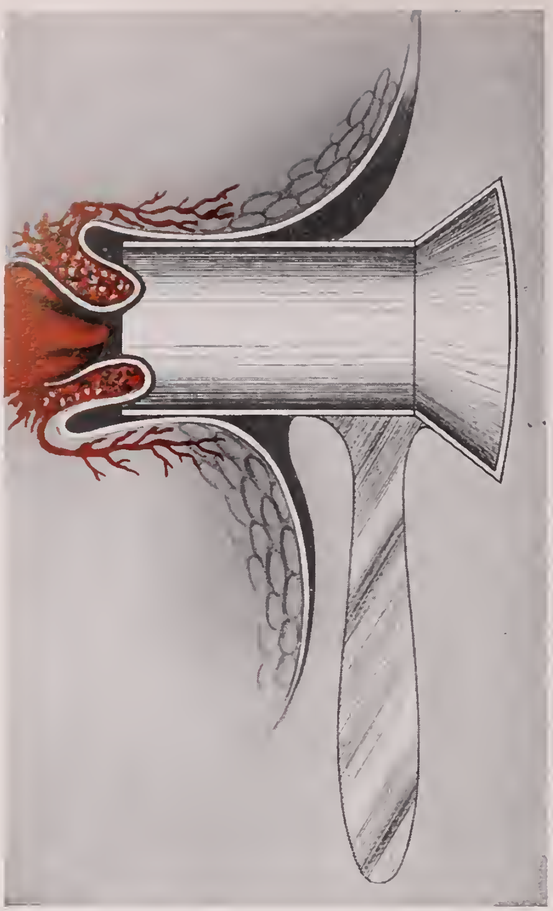

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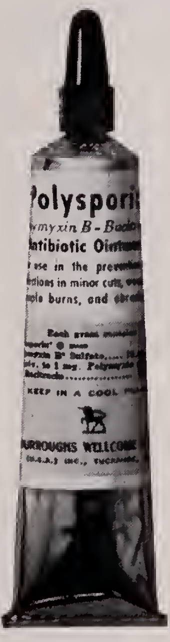

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References: (1) Blouin, L., and Overman, R. R.: Detailed reports in Mead Johnson Research Files.* (2) Gloning, K., and Klausberger, E. M.: Wien. klin. Wchnschr. *70*:145-149 (Feb. 28) 1958. (3) Whittier, J. R., and Dhrymiotis, A. D.: Angiology *13*:324-327 (July) 1962. (4) Horton, G. E., and Johnson, P. C., Jr.: The Application of Radioisotopes to the Study of Cerebral Blood Flow and the Effects of Isoxsuprine (to be published). (5) Dhrymiotis, A. D., and Whittier, J. R.: Current Therap. Res. *4*:124-129 (April) 1962. *Available upon request from Mead Johnson Laboratories, Evansville 21, Indiana.

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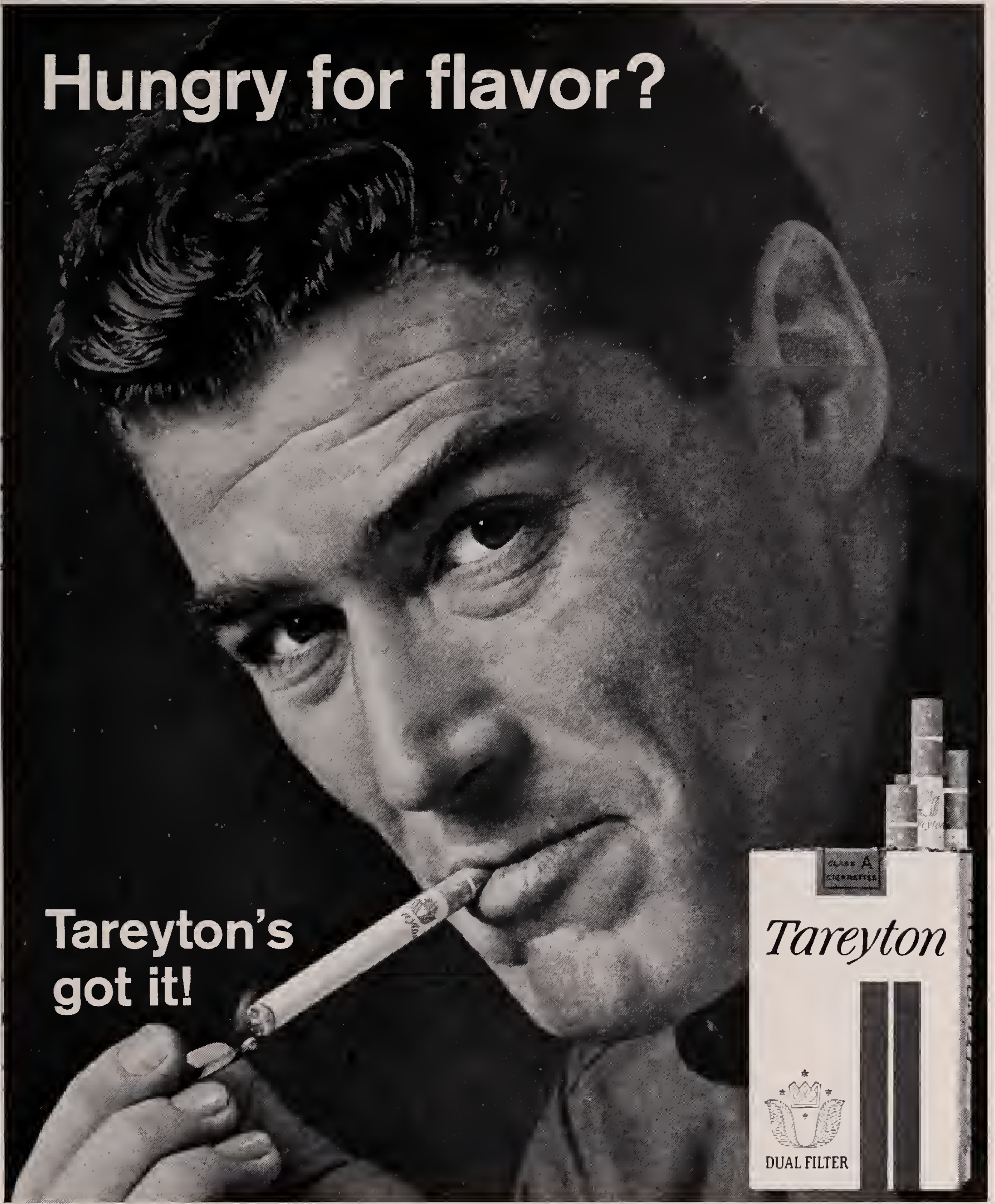

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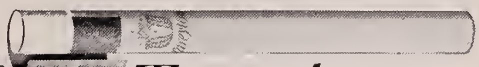

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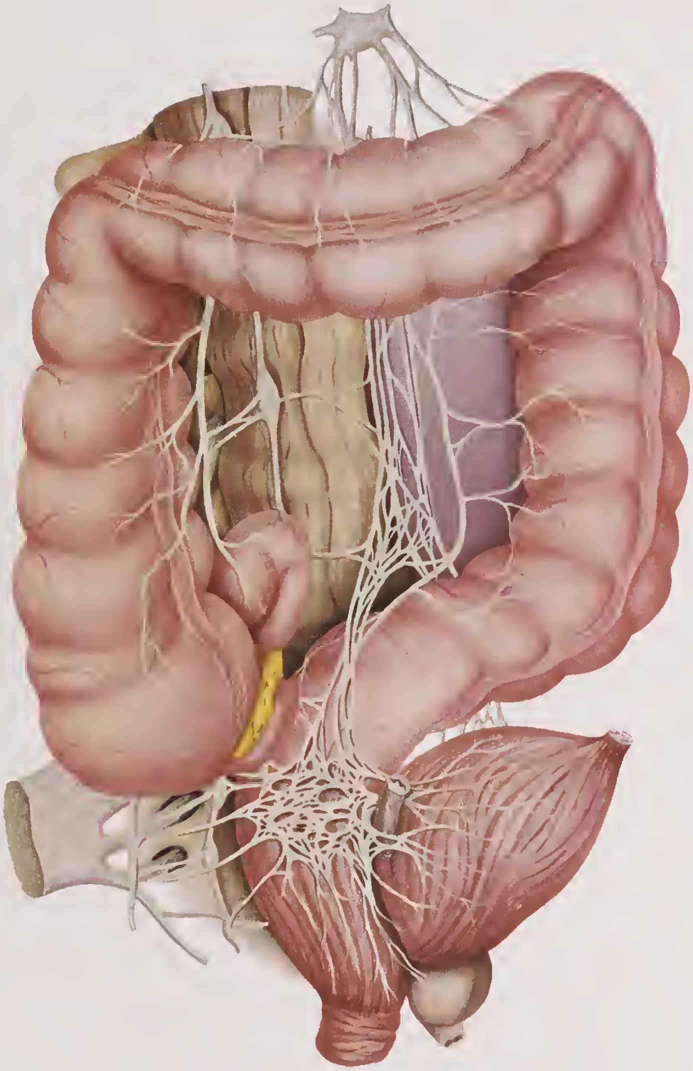

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Dryness of the mouth or blurring of vision may occur but is usually mild and transitory. Urinary retention is rare. Caution should be observed in prostatic hypertrophy — withhold in glaucoma.

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Bottles of 100 and 250.

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containing in each scored tablet 16 mg. phenobarbital (warning: may be habit forming) and 25 mg. mepenzolate bromide. Bottles of 100 and 250.

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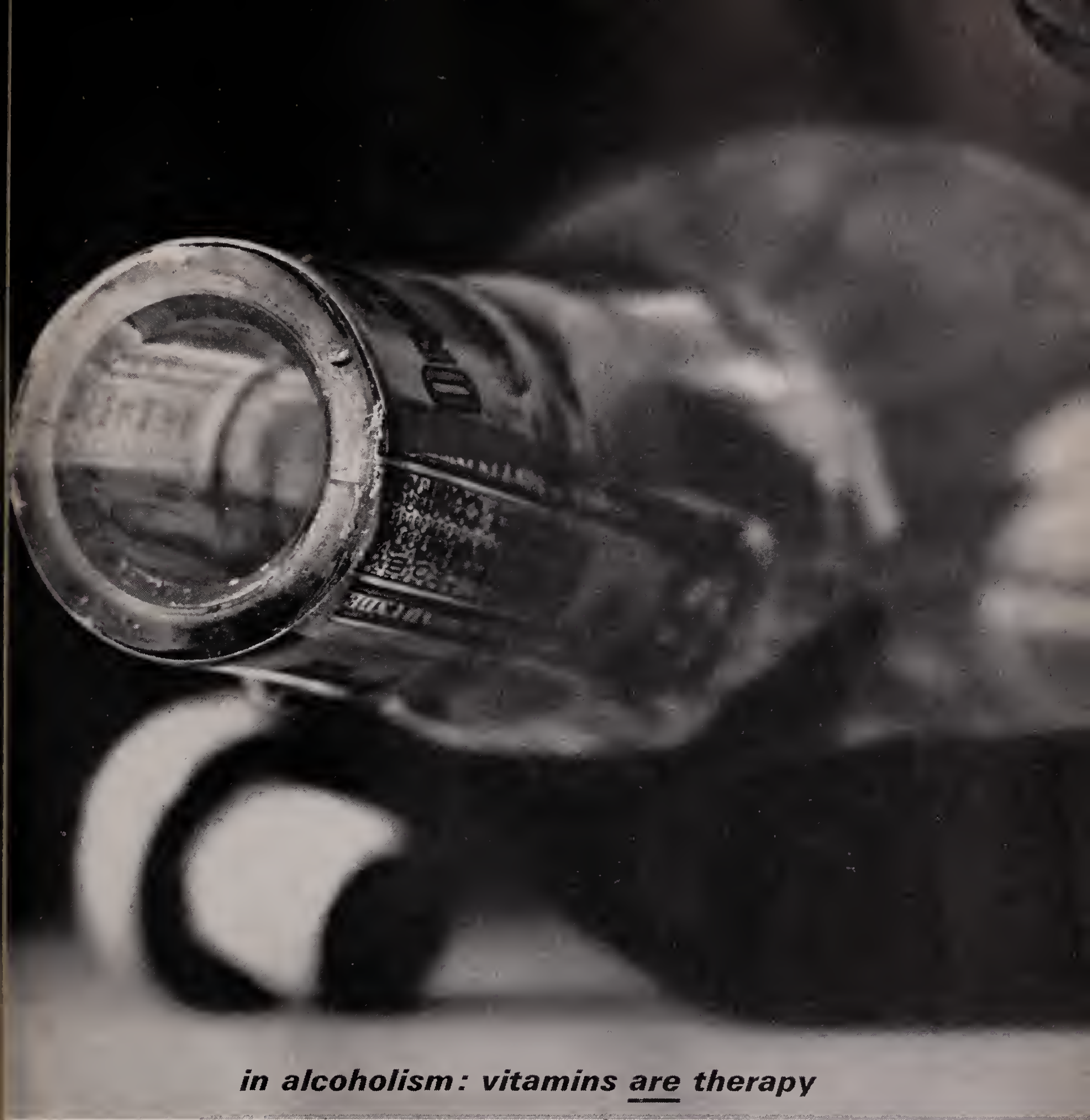

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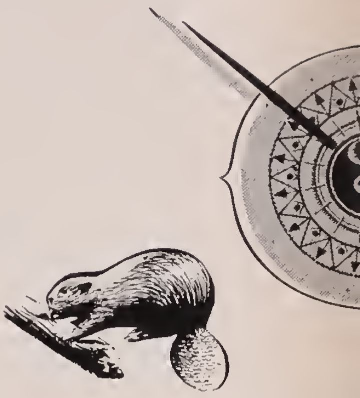

Oregon State Medical Society—2164 S. W. PARK PLACE, Portland 5, Oregon

PRESIDENT *Melvin W. Breese, M.D., Portland*
SECY.-TREAS. *James H. Seacat, M.D., Salem*
EXECUTIVE SECRETARY *Mr. Roscoe Miller, Portland*
annual meeting, September 25-28, 1963, Portland

The Quality of Patient Care

Melvin W. Breese, President of the Oregon State Medical Society, made *medical education* the keystone of his official campaign to advance the quality of patient care in Oregon. Selecting it as the theme for his year in office, he began developing his program in May, 1962, while still President-Elect. The quality of patient care and his plan have been the only subjects of discussion as he visited each of the State's twenty-five component societies.

Stimulated by a report from Columbia University School of Public Health, on the quality and cost of care received by teamster families in the New York area, Dr. Breese asked two questions: "Is there a problem in Oregon?" and "If so, what can be done about it?"

He believes the quality of patient care is a responsibility, not only of each individual physician, but also of state and local medical organizations. He emphasizes that this responsibility is self-imposed upon each individual physician when he subscribes to the Principles of Medical Ethics of the American Medical Association. He contends that constituent and component medical societies obligate themselves to assume responsibilities in this area when they apply for and receive their charters.

broad consultation sought

Armed with these convictions, Dr. Breese, while still President-Elect, sought answers to his questions. As his first move he called into conference representatives of those organizations and agencies he believed were in a position to provide the information he needed and who could best help plan effective approaches.

From the State Board of Medical Examiners, he wanted to know the major reasons for license suspension or revocation and other disciplinary actions. He asked the State Board of Health to give their experience and observation in inspecting and licensing patient care institutions. Representatives of the Oregon State Medical Society grievance and related committees were directed to provide information. The president of the Oregon Association of Hospitals was invited to give views and recommendations of hospital administrators.

A strong believer that education, both at the medical school and at postgraduate levels, was the foundation of any program to advance the quality of patient care, Dr. Breese brought in the faculty of the University of Oregon Medical School and the Society's Committee on Medical Education. He then added to the consulting group two senior citizens from Society membership who through the years had demonstrated continuous and vigorous interest in the issue, and whose opinions were held in high regard.

problem recognized

After two lengthy conferences it was concluded that a problem exists and that it is a continuing one. It was also agreed that any solution would have to incorporate assumption of responsibility by individual physicians and the local and state medical societies. It was also agreed that statutory authority of the State Board of Medical Examiners and the Oregon State Board of Health must be utilized as well as the cooperation of hospital administrators. And, of most significant importance, it was declared that medical education at all levels must be geared to the objective.

With this encouragement and support, Dr. Breese developed his plan which he said, " . . . is not new. It is just formalizing a procedure for doing what we have been doing or should have been doing all along." It calls for the establishment of a Committee on the Quality of Patient Care by the Oregon State

Medical Society and a counterpart by each component society. It calls, also, for the appropriate and timely utilization of resources available through other organizations, and institutions. Dr. Breese suggested that each component society create a committee composed of their most highly regarded and respected members who would be continuously alert for any circumstance which might in any way affect the quality of patient care.

concern for physician conduct

Dr. Breese was especially concerned about conduct of physicians. He gave special emphasis to alcoholism, drug addiction and incapacity or incompetency from whatever cause or any other behavior leading to unacceptable medical practice. He placed great stress upon the fact that the committees should never engage in disciplinary activities or become involved in controversies related to the scope of practice of the various segments of the profession.

The local society committee, he declared, should concentrate on resolving the problem within the local medical community. The local committee could, for example, meet confidentially with the physician failing because of an alcohol problem, point out the dangers to himself and his patients, and encourage him to seek assistance so that he might return to full and competent practice in the community. The physician of advanced age could be persuaded to restrict his practice or to retire while still holding the respect and confidence of his colleagues and the community and before a tragic incident might occur.

If unacceptable practices or mismanagement of cases were observed, the committee could recommend that a scientific program, or series of scientific programs, related to the field of medicine or surgery involved be presented before the local component society bringing to them the most recent techniques, knowledge and experience.

Dr. Breese recommended, further, that the component society committee submit reports to the committee of the Oregon State Medical Society regarding the nature of their problems and the methods used to solve them. They would be reported without identification of any physician or physicians who might have been involved.

Although Dr. Breese hoped that the vast majority of such problems could be resolved by the local society committee, he wanted a Committee on Quality of Patient Care established by the Oregon State Medical Society to which the individual physician or a local committee could appeal. In addition to considering matters referred to it by local society committees, the State committee could also be given the responsibility of disseminating information regarding effective procedures and the practices followed throughout the State. To both committees, he recommended full utilization of the resources of the Society, the University of Oregon Medical School, and the Oregon Association of Hospitals. He recommended also that they use, when appropriate, the legal authority of the Board of Medical Examiners, and the Oregon State Board of Health.

With respect to the two legal arms, Dr. Breese envisioned that their work would be greatly lightened if both the local and state committees were to function effectively. Incidentally, in his presentation before each of the component societies of the State, Dr. Breese was accompanied by a member of the Board of Medical Examiners and a representative of the Oregon State Board of Health.

postgraduate education query

To complement his proposed approach to the quality of patient care, Dr. Breese suggested that the members of the Society be querried regarding their needs and interests in postgraduate education. Thereupon, the Society's Committee on Medical Education in cooperation with the faculty of the University of Oregon Medical School prepared a four-page questionnaire eliciting the physician's views on postgraduate education programs offered not only on the Campus of the University of Oregon Medical School but also the extramural postgraduate courses which might be offered in his own home community. Well over sixty per cent of the membership returned the questionnaires which are now being evaluated and will guide the pattern of postgraduate education in Oregon in the future.

conclusion

All this enthusiasm and hard work on the part of Dr. Breese had its reward. The physicians of the state recognized their responsibility as he presented it to them before their component societies and gave him their unqualified support. This reaction is reflected by the Society's House of Delegates which at its 1963 Midyear Meeting in April unanimously voted to amend the Bylaws to create a standing Committee on the Quality of Patient Care. The functions of the Committee as defined in the Bylaws are:

> The Committee on Quality of Patient Care shall:
>
> (1) stimulate and encourage individual members and component societies to be continuously concerned about the quality of patient care provided by physicians and in hospitals and related institutions within their area of jurisdiction;
>
> (2) consider, evaluate and make recommendations regarding all matters relating to the quality of patient care brought to its attention by members, component societies or from any other sources;
>
> (3) disseminate information to members and component societies regarding procedures, methods and activities which have been or may be utilized to advance the quality of patient care;

(4) maintain appropriate relationships with the Oregon State Board of Medical Examiners, Oregon State Board of Health, University of Oregon Medical School and the Oregon Association of Hospitals in matters associated with the quality of patient care;

(5) encourage each component society to establish a committee with like objectives and purposes.

Legislature passes PKU bill

The 1963 Oregon State Legislature passed Senate Bill 178 relating to phenylketonuria. It became law September 3.

The law contains the following provisions:

> *SECTION 1:* As a matter of public policy of the State of Oregon, every newborn infant should be given a urinalysis examination or such other examination or test as shall be approved by the State Board of Health.
>
> *SECTION 2:* The State Board of Health shall institute and carry on an intensive education program among physicians, hospitals, public health nurses and the public concerning the disease of phenylketonuria.
>
> *SECTION 3:* (1) All physicians, public health nurses and the administrators of hospitals shall report the discovery of cases of phenylketonuria to the State Board of Health, (2) The State Board of Health shall furnish forms to all physicians, public health nurses and hospitals on which the results of tests for phenylketonuria shall be reported to the State Board of Health.

In order to implement the provisions of the law, almost all the hospitals in the state are currently participating in either Guthrie blood and urine detection or the urine filter paper detection. It is urged that all hospitals not now participating consider or reconsider action in regard to participation at an early date. Recent evidence has indicated that confirmed cases of phenylketonuria have been detected as early as the second day of life by the Guthrie method. Therefore, it is important for all hospitals now participating only in urine screening to consider full participation in the Guthrie method. Experience to date would indicate that some cases may be missed through urine testing alone. The first confirmed case of phenylketonuria was detected by blood Guthrie method after slightly over 4,000 tests. In nearly 30,000 urine ferric chloride tests, no case has yet been discovered.

At the present time it is believed that the Oregon State Board of Health is aware of all known cases of phenylketonuria in the State. Notify the State Board of Health of any diagnosed cases which are not currently followed by them. A report form will be forwarded for completion. All new cases should be reported.

Forms for reporting results of tests for phenylketonuria performed in addition to the newborn screening program are being sent to all physicians, to all hospitals, and to all health departments. Additional report forms may be obtained from the State Board of Health. All reports received will be kept on file in the State Board of Health office for any future reference. It is important to understand that the screening of newborns through hospitals should not discourage further testing of all infants several times during the first months of life. Also, any individual, regardless of age, who has a neurologic handicap, such as epilepsy, cerebral palsy, or mental retardation, should be tested for phenylketonuria. Special filter papers for blood Guthrie testing are available on request from the State Board of Health. All presumptive positive ferric chloride tests should be followed by a Guthrie blood test as the first step in confirmation of a case.

The intent of the law is clear. It is the obligation of the medical profession and the Oregon State Board of Health to see that no baby born in Oregon suffers mental retardation because of phenylketonuria.

The Director of the Maternal and Child Health Section of Oregon State Board of Health will be available to assist in any diagnostic follow-up and to discuss phenylketonuria or to answer any questions.

Additional forms may be obtained from Oregon State Board of Health; Maternal and Child Health Section; P.O. Box 231; Portland, Oregon 97207.

Home nursing course on open TV

Those untrained in care of the sick and injured may be advised that open channel TV from Portland and Corvallis is being used to present a ten week course of weekly programs on home nursing procedures, September 18-November 20. A film, produced by the U. S. Army Signal Corps for the American Red Cross, will be transmitted from KOAP-Channel 10, in Portland, and KOAC-Channel 7, Corvallis, 7:30 p.m.

In conjunction with the television program, two-hour workshop sessions will be held at the Red Cross office at 4200 S.W. Corbett Avenue, Portland, October 3, 24, and November 21, starting at 7:30 p.m. Further information may be obtained by calling 228 8561, Portland.

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SECRETARY *Wilbur E. Watson, M.D., Seattle*
EXECUTIVE SECRETARY *Mr. R. W. Neill, Seattle*
annual meeting September 15 - 18, 1963, Seattle

Health Schemes and the Doctor's Freedom

An open letter to delegates to the Washington State Medical Association

Dear Doctor:

Many people feel a little cynical about the doctors' claims that they never think of themselves, but are fighting federal medicine only for the sake of the patient. In reality, not only do we have nothing to hide in desiring our economic and professional freedom, but we have a democratic duty to protect it. Karl Marx said, "Socialize medicine first and all other activities of a nation will follow as the night the day." As the first profession to be thus threatened we are obliged to dramatize our situation. Only because of countless such battles for 200 years have our freedoms been preserved. We might even gain some sympathy from the labor unions who have struggled to establish the value of their services through collective bargaining!

I should like to propose a motion for adoption by the House of Delegates of WSMA:

> *RESOLVED,* that WSMA and AMA should conduct a vigorous campaign to educate physicians and the public regarding the threat to freedom inherent in any scheme that would reduce doctors to economic servitude against their will.

This new and frank approach could be added to the "Operation Hometown" program.

The import of this motion can best be appreciated by reading the article by C. K. Higgins of Calgary in JAMA for May 18, 1963, entitled "Compulsory Health Insurance in Relation to Democratic Ideals", and Edward Annis' inaugural address, "Virtues of Freedom", JAMA for July 13, p. 103. The following random quotations from the article by Dr. Higgins may help clarify, though they are taken out of context and order.

He quotes Article 13 of the Constitution, "Neither slavery nor involuntary servitude, except as a punishment for crime whereof the party shall have been duly convicted, shall exist within the United States or any place subject to their jurisdiction." He pleads for the U.S. medical profession to make people realize that it is carrying on a battle to uphold the inalienable rights of American citizens, and that these principles apply to the "freedom of citizens in all professions and vocations."

"Economic control is present whenever any agency, government or private, becomes the sole buyer and seller of medical services or any other service in the community."

"—a power over a man's subsistence amounts to a power over his will."

"Social justice has never been achieved by reducing an individual or group to servitude."

"Free men and institutions have the right to place a value on their labor and services. These freedoms are endangered when the state promises the people the free tax-supported services of others with the known opposition of those individuals and institutions whose duty it would be to provide the services."

"The right of a person to sell his labor and services upon such terms as he deems proper is the very essence of individual freedom, and, conversely, a denial of this right is the very essence of slavery."

"There is general agreement that free essential services should be provided for the deserving needy, and there *should* be agreement that it would be wiser to grant more generous benefits to those in need than to grant equal benefits to all, regardless of need."

In regard to this last point, it is my personal view that it is imperative for the profession to "get on the stick" to implement a plan more workable than the Kerr-Mills Bill. It probably should be a plan to aid the needy by applying the aid through commercial insurance carriers to minimize bureaucratic superstructure and unnecessary governmental controls and expense.

The profession in Saskatchewan regretted not having sold these ideas early enough and hard enough to their public. Recently Alberta did adopt a plan contrasting with that of Saskatchewan. The Alberta government will subsidize premiums for needy persons through existing commercial agencies on an optional basis.

The Santa Barbara Medical Society, in a prolonged process of negotiations with the California Medical Association, California Physicians Service, and State Welfare Department, has set up a prepaid medical program for persons eligible under public assistance. The Bow Bill, presently in the House Ways and Means Committee, contains a number of valuable features. The Foundation for Medical Care Plans of California is accumulating much experience along these lines as are other groups.

It is to be hoped that the best features of these plans can be utilized for a good answer that would satisfy the unions and others agitating for care for the needy elderly without destroying the freedom which we all cherish. In the meantime, the delay in developing such a program should not deter us from the educational campaign advised by Dr. Higgins and implied by Dr. Annis.

Yours sincerely,
L. F. TURNBULL, M.D.
Seattle, Washington

Berge heads AMA Judicial Council

James Hallard Berge, of Seattle, was named chairman of the Judicial Council of the American Medical Association at the Atlantic City meeting last June. He has been a member of the Council since 1960. This five-man group has been called the Supreme Court of the AMA. Judicial power of the Association is vested in the Judicial Council and its decisions are final. It has original jurisdiction in questions of membership, controversies arising under the Constitution and Bylaws or under the Principles of Medical Ethics. The Council has appellate jurisdiction on matters of law and procedure, but not of fact, arising between a state association and one of more of its component societies, between component societies of a state association, or between a member or members and the various organizational units. The Council may investigate general professional conditions and matters pertaining to relations of physicians to one another and to the public. It may also request the President to appoint investigating juries to which it may refer complaints of unethical conduct appearing to be of more than local concern. If, as a result of the investigation, a member is prosecuted before the Judicial Council, it may acquit, admonish, suspend or expel the accused member. Recorded opinions and interpretations of the Judical Council are considered to be a part of the Principles of Medical Ethics. Of all the councils and committees of the American Medical Association, none requires the degree of wisdom, care, and impartiality demanded of members of the Judicial Council. A heavy load of responsibility must rest on the shoulders of the chairman of such a group.

JAMES BERGE

OBITUARIES

DR. HOMER A. SMITH *died May 29 of gastric hemorrhage in Spokane. He received his degree from the State University of Iowa College of Medicine in Iowa City in 1906. He was 82.*

DR. WILLIAM C. SPEIDEL, *80, died June 17 in Seattle of acute myocardial infarction and arteriosclerosis. In 1908 he graduated from Rush Medical College; in 1911 he was licensed. Dr. Speidel was a member of the International College of Surgeons and American Association for Surgery of Trauma. He was retired from active practice.*

DR. CRAIG R. SIGMAN, *of Olympia, was killed in an automobile accident near Boulder City, Nevada on July 20, at the age of 43. He received his degree from University of Nebraska College of Medicine in 1946. Dr. Sigman served as flight surgeon in the Air Force from 1947 to 1954. He was licensed in 1959, and had practiced in Yelm since that time.*

DR. BETTY A. NILSSON, *died June 3 in Seattle of pulmonary edema and myocardial insufficiency. She was 85. Her degree was granted by the University of Illinois College of Medicine in 1907. She was retired from active practice.*

DR. JOAN L. HABERMAN, *39, died June 13 from a crushing head injury received in a two-car head on collision. Born in Wisconsin, she graduated from the University of Wisconsin Medical School in 1949. She was licensed in 1950. She served as acting Co-Medical Director, Northern State Hospital in Sedro-Woolley. Dr. Haberman was a resident of Everett.*

Continued on page 745

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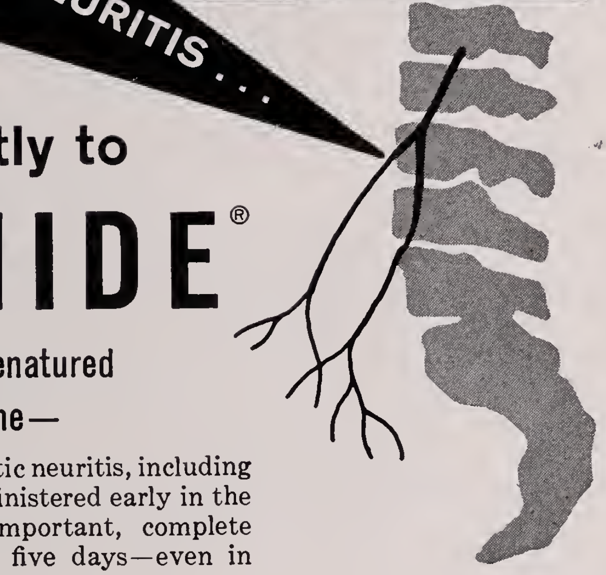

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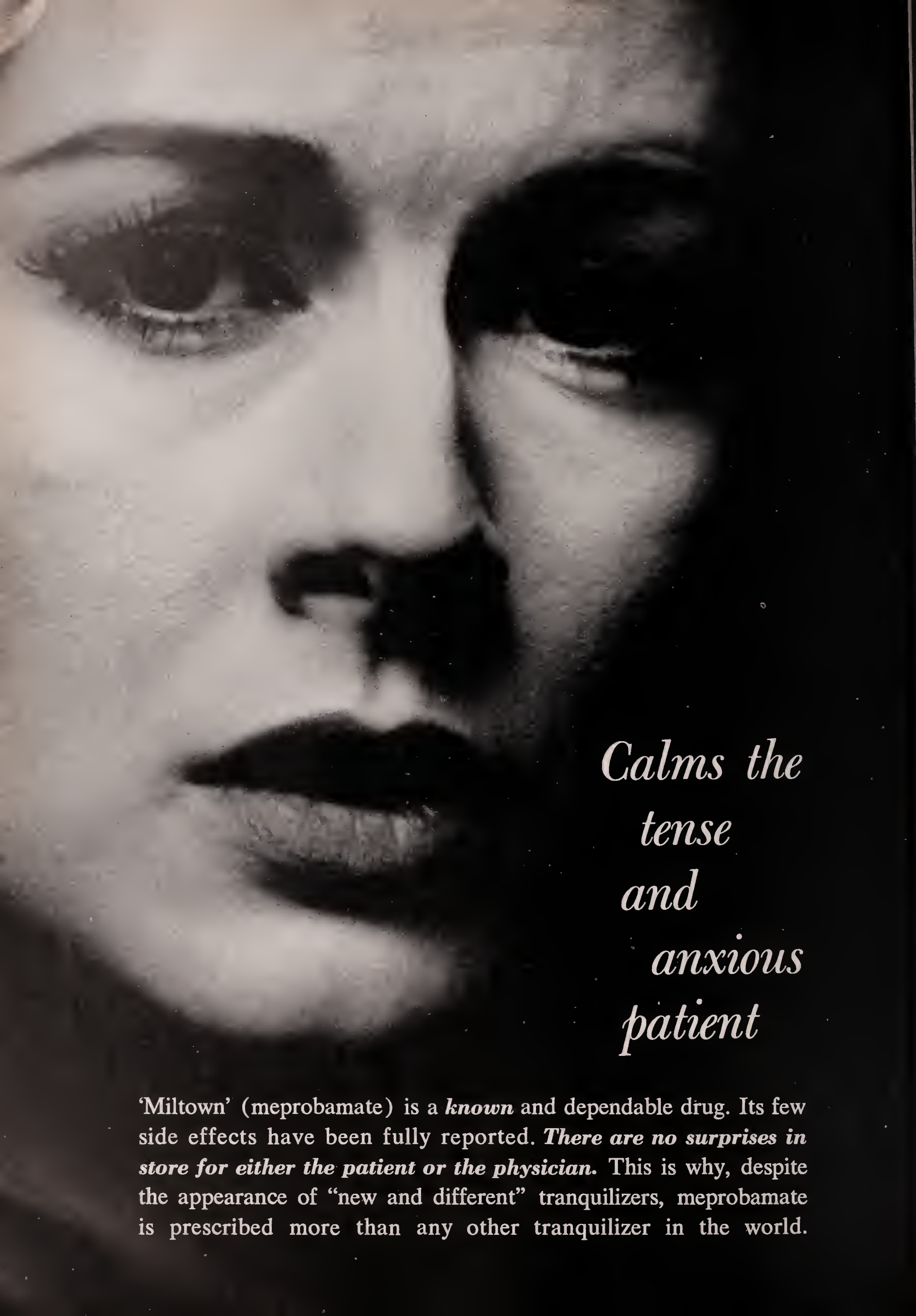
References: 1. Baker, A. G.: Penn. Med. J. *63*:697 (May) 1960. 2. Smith, R. T.: New York Med. (Aug. 20) 1952, pp. 16-19. 3. Smith, R. T.: Med. Clin. N. Amer. (Mar.) 1957. 4. Lehrer, H. W.; Lehrer, H. G., and Lehrer, D. R.: Northw. Med. (Nov.) 1955. 5. Sforzolini, G. S.: Arch. Ophthal. *62*:381 (Sept.) 1959. 6. Gile, J. H.: W. Virginia Med. J. *59*:120-122 (May) 1963.



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*Stetson, J.B., and Jessup, G.V.S.: Anesth. & Analg. 41:203, 1962.

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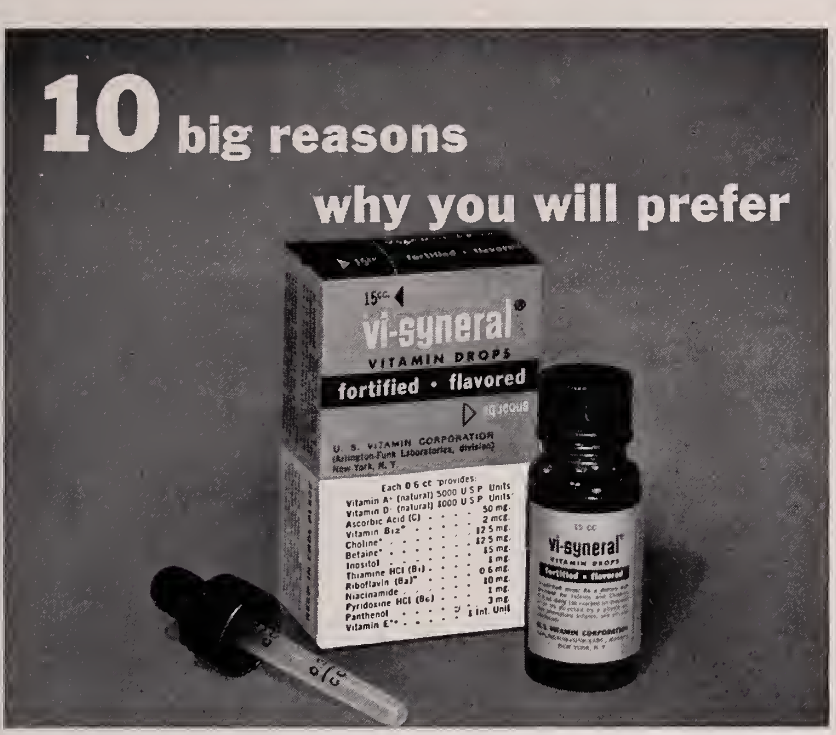
Continued from page 738

DR. E. DEMAR ANDERSON, 62, *who had practiced in Seattle for some 22 years, died June 26. He was graduated from Northwestern University Medical School in 1932, was licensed in 1940. Dr. Anderson was past president and trustee of Puget Sound Academy of Ophthalmology and Otolaryngology. Death was due to cerebral hemorrhage from a congenital arterial aneurism.*

DR. JOHN HENDERSON, *a retired Seattle physician, died July 22 in Utah, at the age of 97. He practiced in Seattle and Seabold, Bainbridge Island, where he resided, from 1910 until his retirement in 1950. Born in Edinburgh, Scotland, he was granted his degree from the Gross Medical College, Denver, in 1901. Dr. Henderson commanded a hospital in France during World War I.*



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AMA Annual—San Francisco, June 21-25, 1964, New York, June 20-24, 1965.

AMA Clinical—Portland, Dec. 1-4, 1963; Miami Beach, Nov. 29-Dec. 2, 1964.

Idaho State Medical Association—June 17-20, 1964, Sun Valley.

Northwest Soc. for Clin. Research—Jan. 10-11, 1964, Vancouver, B. C.
Pres., Denys K. Ford, Vancouver
Sec., R. E. Beck, Vancouver

Oregon State Medical Society—Sept. 25-28, 1963, Portland.

Washington State Medical Association—Sept. 15-18, 1963, Seattle.

West Coast Allergy Society, Dec. 5-7, 1963, Las Vegas, Nevada
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Sec., James E. Stroh, Seattle

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Oregon Dermatologic Society—Portland 2nd Wednesday (Nov., Jan.-Apr.)
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Pres., Terence Cochran, Portland
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Oregon Radiological Society—University Club, Portland, 2nd Wednesday through school year
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Sec., James A. Schneider, Portland

Ore. Soc. Obst. & Gynec.—Portland, Park Heathman, 3rd Fri. (Oct., Nov., Jan., May)
Pres., W. L. Hartmann, Portland
Sec., T. A. Treanor, Portland

Oregon State Society of Anesthesiologists—Portland, 3rd Friday (except June, July, Aug.)
Pres., J. A. Siebs, Eugene
Sec., P. E. Schaff, Portland

Oregon Urological Society—Quarterly Meetings, University Club, Portland
Pres., John Hand, Portland
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Portland Academy of Hypnosis — 3rd Monday (Sept.-May) Congress Hotel
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Portland Academy of Pediatrics—1st Monday
Pres., W. M. Clark, Jr.
Sec., J. W. Bussman

Portland Surgical Society—last Tuesday (Sept.-May), UOMS Library
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Puget Sd. Acad. Ophth. & Oto.—3rd Tues. (Oct.-May) Seattle or Tacoma. Annual—Seattle, Jan. 17, 18, 1964.
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Seattle Academy of Surgery—3rd Wed. bi-monthly; Seattle Yacht Club.
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Seattle Gyn. Soc.—3rd Wed. exc. June, Aug., Dec., Feb.
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Sect., E. T. MacCamy, Seattle

Seattle Pediatric Society—3rd Friday (Sept.-May), College Club
E. J. Wollenweber, Seattle
A. L. Skinner, Seattle

Seattle Surg. So.—4th Mon. (Sep.-June) Annual—Seattle, Jan. 24-25, 1964.
Pres., Eric Sanderson, Seattle
Sec., R. C. Coe, Seattle

Spokane Society of Internal Medicine—Quarterly, Rockwood Clinic Annual—Mar. 7, 1964
Pres., Loren Gothberg
Sec., Arch Logan, Jr.

Tacoma Academy of Internal Medicine—4th Tuesday (Sept.-May)
Pres., R. A. Kallsen
Sec., R. A. O'Connell

Tacoma Surgical Club—May 2, 1964, 3rd Tuesday (Sept.-May)
Pres., Dumont Staatz
Sec., Robert B. Burt

Washington Academy of Clinical Hypnosis—3rd Friday (Sept.-June)
Pres., Tom Wall, D.M.D., Seattle
Sec., John E. Nelson, Seattle

Washington Academy of General Practice—Tacoma, May 14-16, 1964
Pres., Duncan Robertson, Seattle
Sec., John Gahringer, Wenatchee

Washington State Obstetrical Associa-October 12, 1963, Yakima.
Pres., R. K. Plant, Seattle
Sec., F. LeCocq, Yakima

Washington State Radiological Society—Seattle, 4th Mon., (Sept.-Apr.) Business Session, Meany Hotel, Scientific Sn. UWSM X-ray Dept.
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Wash. St. Soc. of Anesthesiologists
Pres., M. W. Bulmer, Wenatchee
Sec., Robt. M. Kintner, Wenatchee

Wash. St. Soc. of Allergy
Pres., Alexander Altrose, Seattle
Sec., Samuel H. Tarica, Seattle

Washington State Society of Internal Medicine—Sept. 18, 1963
Pres., D. M. Ulrich, Seattle
Sec., J. H. Lindberg, Seattle.

Yakima Obstetrical and Gynecological Society—Last Monday (except July, Aug., Dec.)
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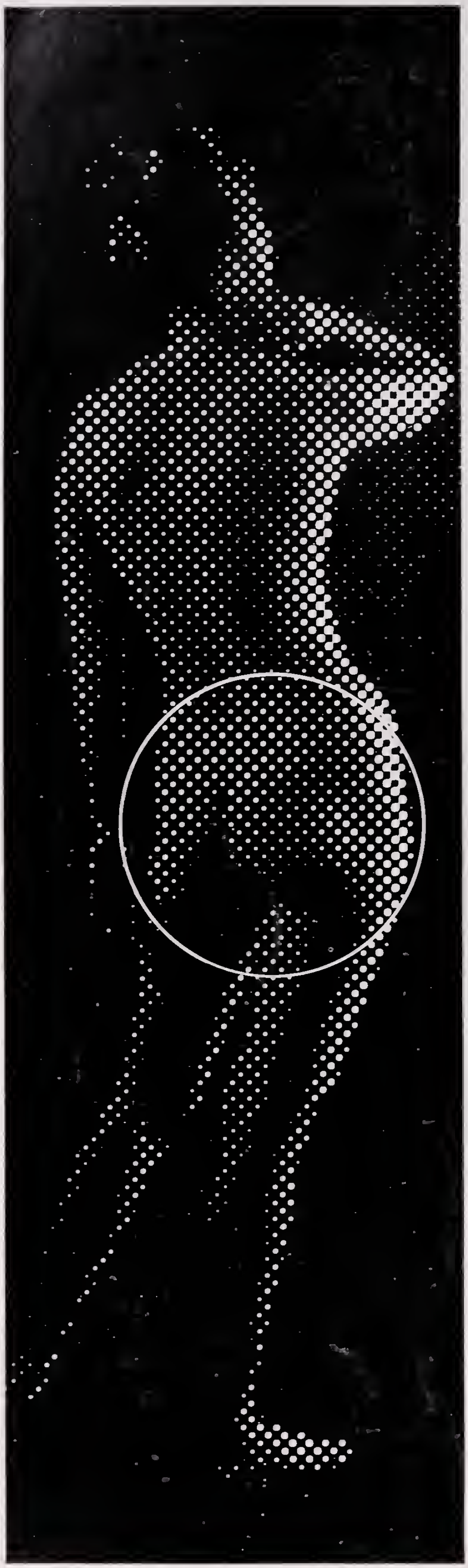

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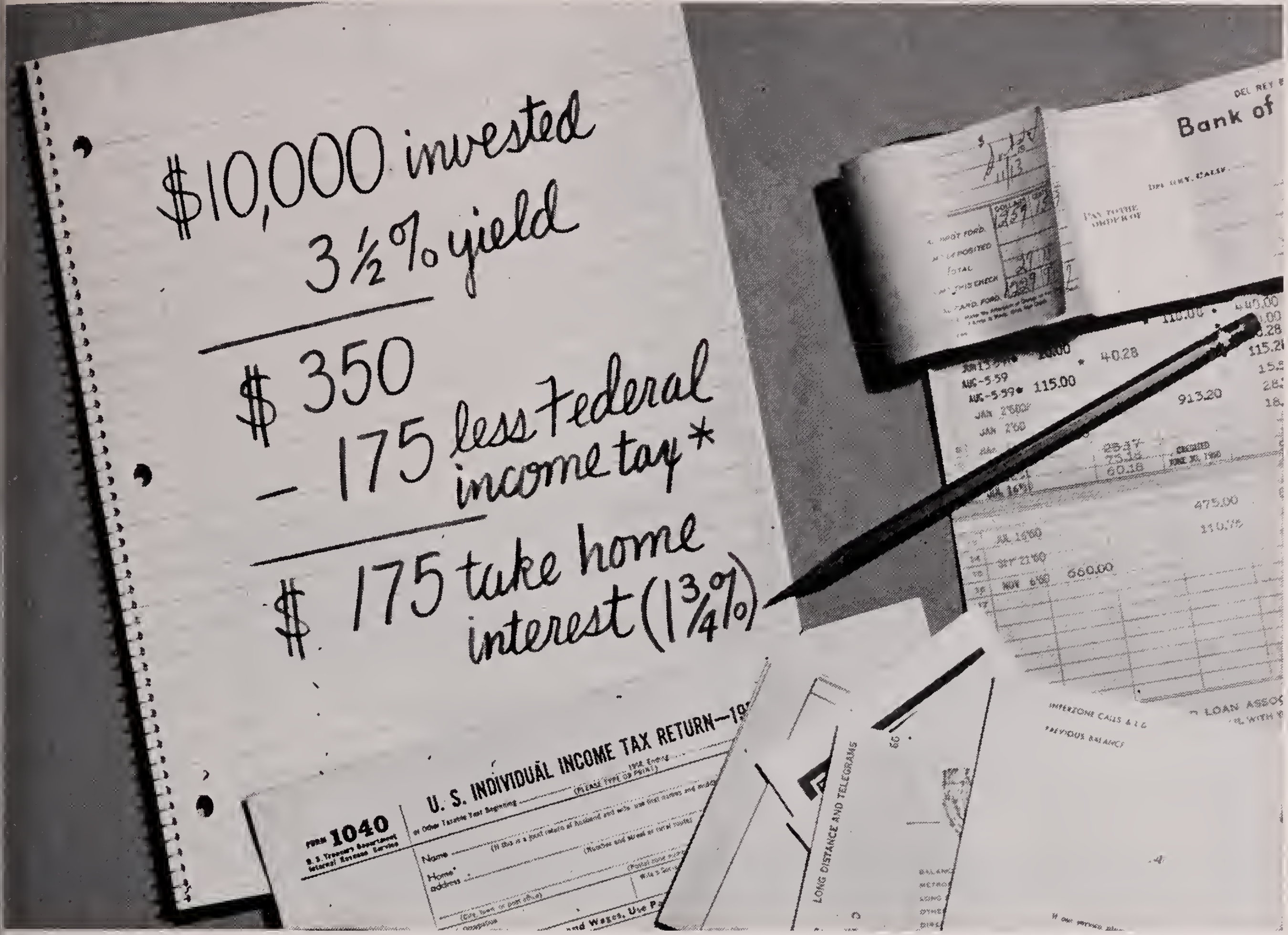
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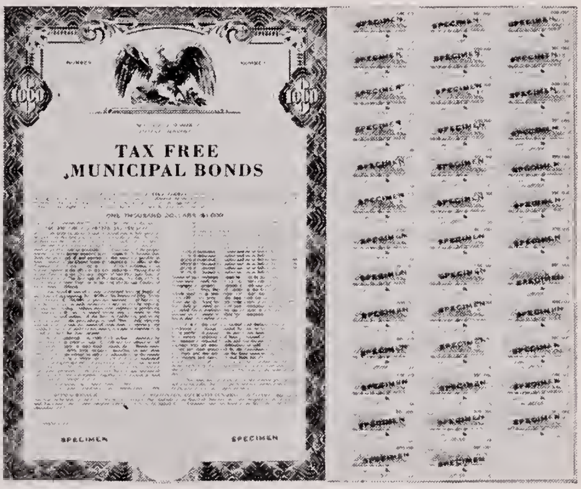

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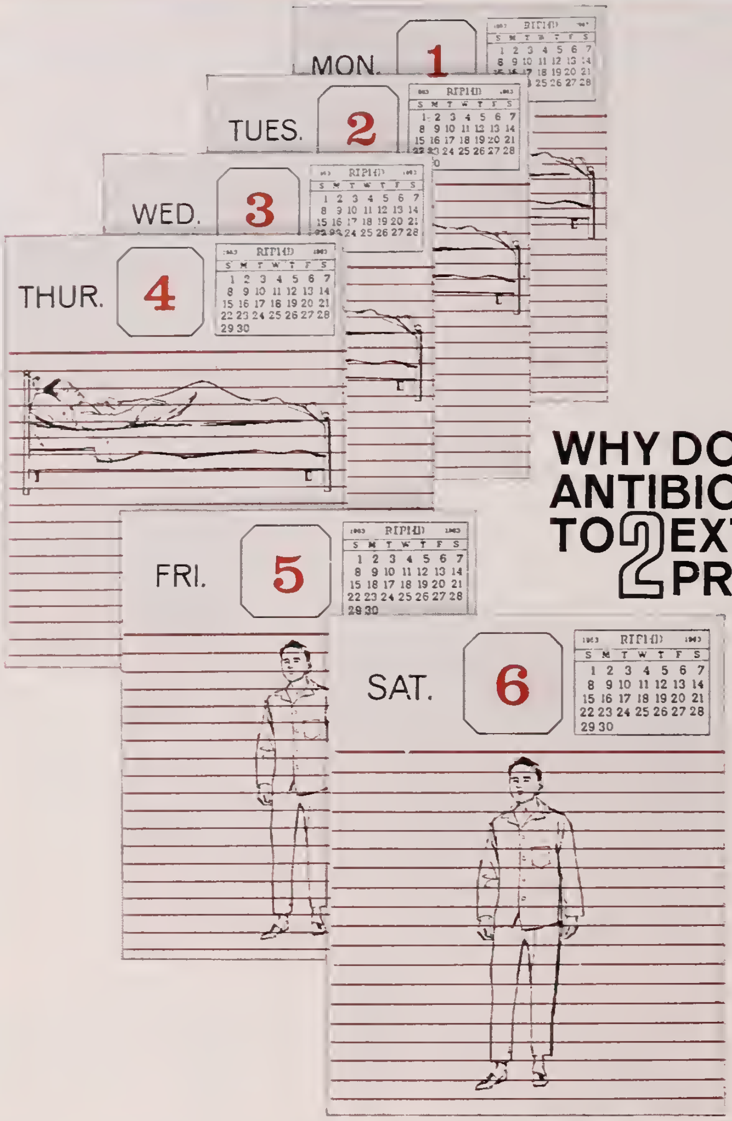
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ORTHWEST MEDICINE

Why treat early, mild or labile hypertension?

Current opinion strongly indicates that the early control of mild or intermittent hypertension prevents or delays the rise of blood pressure to dangerous levels that disable the patient or shorten his normal life span.[4,8,9,17] It is at this early, still responsive, stage that treatment is most effective—blood pressure is more easily held in check and symptoms either disappear or do not develop. Therapy should be not only safe and effective, but as free as possible from disturbing side effects that may burden the often asymptomatic hypertensive patient. Therapy with CAPLA (mebutamate) closely meets these requirements.

the right therapy for the early, mild

Brief Summary

Indications: 'Capla' (mebutamate) is indicated for control of hypertension, either alone in mild cases, or in conjunction with diuretics or peripherally acting hypotensive agents in more severe cases. Its mild tranquilizing properties are often found an additional benefit to its antihypertensive action. *Side effects:* Drowsiness and occasional lightheadedness, usually transient, are often signs of dosage higher than necessary for therapeutic effect. *Contraindications:* There are no known contraindications to mebutamate.

Complete product information available in the product package or to physicians on request.

Dosage: Usual dosage, one 300 mg. tablet 3 or 4 times daily, before meals and at bedtime. Dosage should be adjusted to individual requirements; for example, older patients may require lower dosage.

Supplied: Each tablet contains mebutamate, 300 mg.; bottles of 100 white, scored tablets.

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Why CAPLA® (mebutamate) is indicated.

CAPLA (mebutamate) aims at the ideal in therapy for the early, mild or labile patient—to treat the hypertension while avoiding dangerous or distressing side effects.[2,3,5-7,10-16,18-20] With the first dose, CAPLA (mebutamate) begins to ease pressure toward normal; and, on regular dosage, helps hold blood pressure to a more normal range. CAPLA (mebutamate) works gently by acting directly at the vasomotor control centers to normalize the flow of constricting impulses from the brainstem to the arterioles.[1] With this unique central acting pressure lowering agent, *all* autonomic and *most* other side effects are avoided.[2,3,5-7,10-16,18-20]

or labile hypertensive...CAPLA® (mebutamate)

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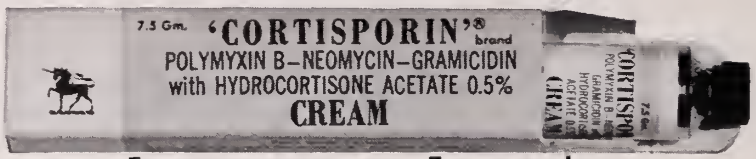

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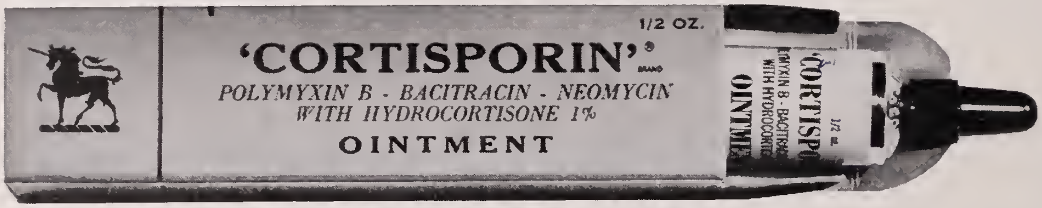

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CREAM—*Ingredients:* Each gram contains 'Aerosporin'® brand Polymyxin B* Sulfate 10,000 Units; Neomycin Sulfate (equivalent to 3.5 mg. Neomycin Base) 5.0 mg.; Gramicidin 0.25 mg.; Hydrocortisone Acetate 5.0 mg. (0.5%).

In a smooth, white, water-washable vanishing cream base with a pH of approximately 5.0. Inactive ingredients: liquid petrolatum, white petrolatum, propylene glycol, polyoxyethylene polyoxypropylene compound, emulsifying wax, distilled water, and 0.25% methylparaben as preservative.

Available: In tubes of 7.5 Grams.

OINTMENT—*Ingredients:* Each gram contains 'Aerosporin'® brand Polymyxin B* Sulfate 5,000 Units; Zinc Bacitracin 500 Units; Neomycin Sulfate 5 mg. (equivalent to 3.5 mg. Neomycin Base); Hydrocortisone 10 mg. (1%).

In a special white petrolatum base.

Available: In tubes of ½ oz. and ⅛ oz.

*U.S. Patent Nos. 2,565,057–2,695,261

Indications: Wherever inflammation or infection occurs and is accessible for topical therapy.

Contraindications: These drugs are contraindicated in tuberculous, fungal or viral lesions (herpes simplex, vaccinia and varicella).

Caution: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

Complete literature available on request from Professional Services Dept. PML.

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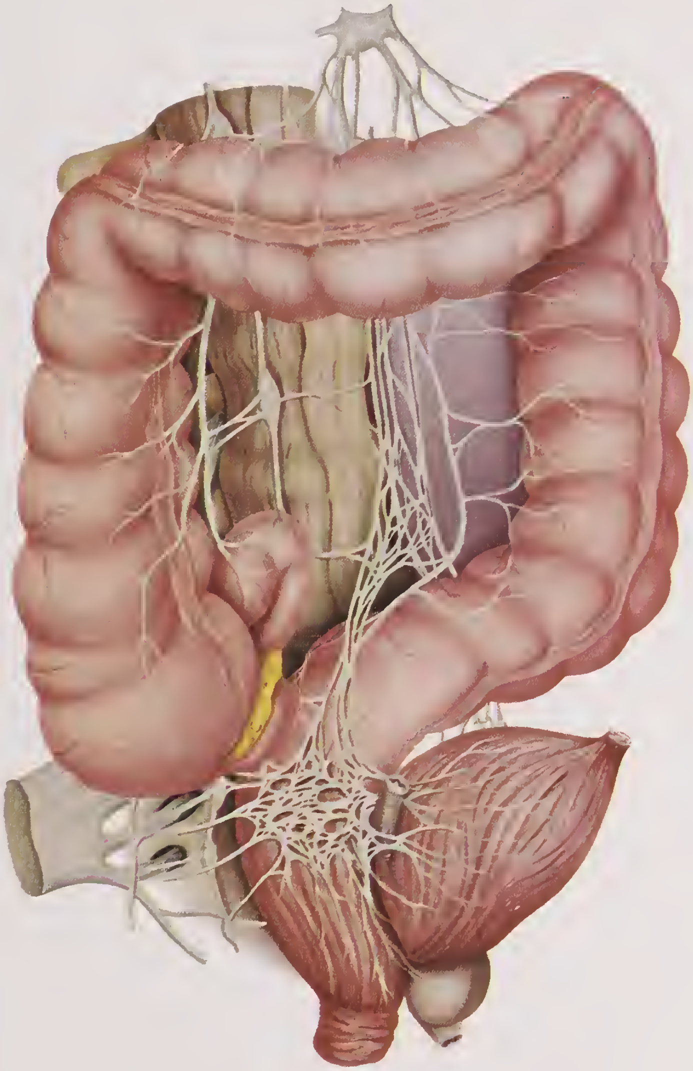

calms the hyperactive colon

calms the hyperactive colon

IN · irritable colon
spastic colon
ulcerative colitis

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RELIEVING · pain · cramps · bloating
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Action is exerted *selectively* on the colon with less effect on other viscera. One or two tablets three times a day and one or two at bedtime usually provide prompt relief. Begin with lower dosage and adjust according to response. CANTIL with PHENOBARBITAL may be prescribed if sedation is required.

Dryness of the mouth or blurring of vision may occur but is usually mild and transitory. Urinary retention is rare. Caution should be observed in prostatic hypertrophy — withhold in glaucoma.

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CANTIL WITH PHENOBARBITAL

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ISOXSUPRINE HCl

increases cerebral blood flow[1-4] □ reduces number of ischemic attacks[5] □ well tolerated in long-term therapy

Dosage and administration: Oral—10 to 20 mg. (1 to 2 tablets) t.i.d. or q.i.d.; I. M.—5 to 10 mg. b.i.d. or t.i.d. *Contraindications:* There are no known contraindications to oral administration in recommended doses. *Cautions:* Do not give immediately postpartum or in the presence of arterial bleeding. Parenteral administration not recommended in the presence of hypotension or tachycardia. Avoid intramuscular doses above 10 mg. *Side effects:* Occasional palpitation and dizziness usually controllable by dosage adjustment. Brief hypotension or tachycardia may occur with intramuscular doses of 10 mg. or more.

For complete details on indications, dosage, administration, and clinical background, see the brochure of this product available on request from Mead Johnson Laboratories, Evansville 21, Indiana.

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Cautions: Severe mental depression has appeared in a small percentage of patients, primarily in a dosage above 1 mg. daily. Usually the patient had a pre-existing, incipient, endogenous depression which was unmasked or accentuated by reserpine. When the drug is discontinued, depression usually disappears, but hospitalization and shock therapy are sometimes required. Daily dosage above 0.25 mg. is contraindicated in patients with a history of mental depression or peptic ulcer. Withdraw Serpasil (reserpine) 2 weeks before surgery, if possible. For emergency surgical procedures, vagal blocking agents should be given parenterally to prevent or reverse hypotension and/or bradycardia.

Supplied: Tablets, 0.1 mg., 0.25 mg. and 1 mg.

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115 reasons why SYNALAR® (fluocinolone acetonide) is replacing hydrocortisone

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Since 1960, 115 clinical papers have appeared or are in press on the use of fluocinolone acetonide. These reports, on 4,562 patients, confirm the success of Synalar (fluocinolone acetonide) in the treatment of a wide range of inflammatory dermatoses.

Documented results show that this important advance in topical therapy:

- is consistently effective both initially, and should retreatment be required
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Tanana Revisited

EDITOR, NORTHWEST MEDICINE:

Dr. Fritz needed about one hundred words to say that, in his opinion, wholesale removal of tonsils and adenoids appeared to be indicated in the treating of the Alaskan native children. (NORTHWEST MEDICINE, August 1963). Instead he used several thousand words for recrimination, frustration and self-glorification that got rather sickening as one continued to read. One did continue to finish the article, though no longer interested in the subject matter, but to count out of sheer curious wonder, the number of "I's", "me's" and "my's". There are at least sixty-six.

Not that I agree with this modest savior who compares himself with Semmelweis. No indeed. For eight years as a physician for the Office of Indian Affairs in Alaska (and therefore incompetent according to the Doctor) I removed approximately an apple box full of tonsils and adenoids. I am not particularly proud of having done so. I know now that most of these should have been left alone and am naive enough to believe an important barrier to infection was often removed needlessly.

On the other hand, improved living standards and diet, better hygiene, which is deplorable throughout native Alaska, and the use of sulfonamides and antibiotics serve, as they do elsewhere to control these infections which Dr. Fritz so loquaciously deplores.

This prophet crying in the wilderness would be more convincing, perhaps, were he a bit more humble. His sincerity is suspect.

Very truly yours,

L. A. WHITE, M.D.

642 Eugene Medical Center

Eugene, Oregon

Use of Endotracheal Tube

EDITOR, NORTHWEST MEDICINE:

On page 598 of the August, 1963 NORTHWEST MEDICINE, Henry D. Green, an anesthetist, writing on "Anesthetic Problems in Severely Injured Patients" stated: "The endotracheal tube may even be left in place five to seven days, if it is changed regularly as with a tracheostomy tube."

Anesthetists have saved many lives by prompt insertion of an endotracheal tube; but to leave a tube in place for over one day may produce contact ulcers, granulomas, and chronic laryngitis. The most serious objection to an indwelling endotracheal tube is the formation of mucous plugs. One such catastrophe occurred a number of years ago in the Children's Orthopedic Hospital.

Will an anesthetist be around in the middle of the night when the tube comes out or becomes plugged? Reinsertion requires a direct laryngoscopy by a skilled physician.

A tracheostomy canula can be cleaned by a nurse or house physician. It is less traumatic and far safer than the most carefully inserted endotracheal tube.

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Metamucil, therefore, fulfills a basic function in the treatment of geriatric constipation. It both softens hard, dehydrated fecal concretions and adds smooth, nonirritant, easily compressible hydrophilic bulk.

Metamucil applies a physiologic principle to correct constipation naturally.

Average Adult Dose: One rounded teaspoonful of Metamucil powder (or one packet of Instant Mix Metamucil) in a glass of cool liquid. To Metamucil powder, a refined, purified and concentrated psyllium hydrophilic mucilloid, an equal amount of dextrose is added as a dispersing agent. Each dose of the powder furnishes a negligible amount of sodium and 14 calories. To the mucilloid in Instant Mix Metamucil citric acid, sodium bicarbonate and mild flavoring are added. Each dose of Instant Mix Metamucil furnishes 0.25 Gm. of sodium and 3 calories. Metamucil is available as Metamucil powder in containers of 4, 8 and 16 ounces and as flavored Instant Mix Metamucil in cartons of 16 and 30 single-dose packets.

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AMA at Portland

The 1963 Clinical Meeting of the American Medical Association at Portland, December 1-4, will provide an exceptional opportunity for those who wish to keep abreast of progress. The program has been planned to cover all fields in which rapid progress is being made but will also cover a number of familiar topics about which there is new thought. If quality of program may be used as an indicator, registration at the Portland meeting should break all records for a medical meeting in the Northwest.

Clinical meetings of the American Medical Association are designed to do two things. They are primarily postgraduate review sessions and they bring the AMA to those who may not have ready opportunity to attend the annual sessions. While the annual meeting, held in June each year, does not lack in educational material, it is not restricted in scope and includes consideration of every phase of AMA activity. The clinical meeting concentrates on material of interest in the daily practice of medicine. Annual meetings are held in only four major cities, rotating usually —Chicago, Atlantic City, San Francisco, New York. Clinical meetings are scheduled to permit attendance by those in other sections of the country who cannot easily get to the larger meeting. Due to the fact that they are planned to cover practical matters, they are of considerably more interest to the clinician, than are the annual meetings.

Although major emphasis is on education, the clinical meeting also includes a meeting of the House of Delegates. Reports of committees on work in progress, reports of officers, and resolutions, are given official consideration by the only policy making body of the AMA. Reference committees of the House hold open hearings at which any AMA member may present his views or urge specific action. Those unfamiliar with the function of the House of Delegates, or who do not realize its power through representation should, by all means, watch at least part of its operation while in Session at Portland.

The 1963 Clinical Meeting at Portland will provide an excellent opportunity for those in the area to benefit from fulfillment of the two objectives of AMA clinical meetings. It brings a superb postgraduate review session and a demonstration of the way any member may influence the organization. It will be an interesting meeting. ■

Maybe It's a Cosmetic

Gertrude Stein must have disciples in the Food and Drug Administration who go around muttering, "A drug is a drug, is a drug, is a drug" while others in that fountainhead of pharmacologic wisdom must be repeating, in sotto vo'ce, "It is not, it is not, it is not." Maybe it's a cosmetic.

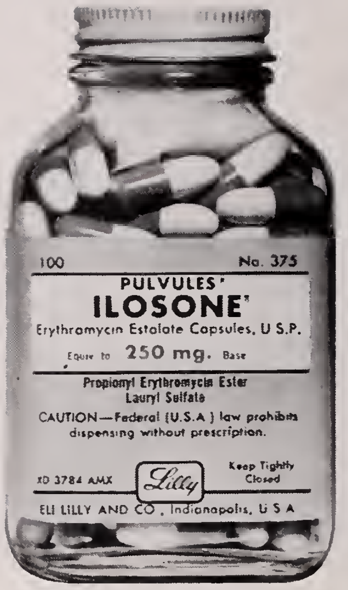
The momentous problem of deciding about drug vs. cosmetic has arisen over the sun tan business, or rather, the business of preventing it or augmenting it. The delicate balance of decision seems to swing about the prevention-augmentation balance. If the manufacturer appeals to those bent on stimulating their melanophores, he may call his product a cosmetic. As swiftly as a watermelon seed escaping from pressure between thumb and finger, he frees himself from disclosing the ingredients in his concoction.

If, however, he prints his advertisements in red, rather than brown, and claims he can take four-sevenths of the letters out of sunburn, he's a drug maker and subject to all the rules applying to those who make tetracyclenes and prednisolone. He has to disclose.

If he claims for the stuff an ability to prevent tanning, or prevent sunburn, or aid in healing sunburn, he's in the drug business and must list the active ingredients on the label. If he says it helps produce a tan, he's only selling cosmetics and needn't say a thing about what's in the bottle, even if it's full of dihydroxyacetone.

It's just that simple in the wonderful world of bureaucracy. ■

sign
of
infection?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Developing Uncommon Skill with Common Emotional Problems

WILLIAM R. CONTE, M.D. Olympia, Washington / ESSEY WOLFROM, M.S.W.
Fort Steilacoom, Washington / WILLARD B. REW, M.D. Yakima, Washington

abstract

CONTE, W. R., E. WOLFROM, AND W. REW. (Division of Mental Health, Washington State Department of Institutions, Olympia, Wash., U.S.A.) Developing uncommon skill with common emotional problems. Northwest Med 62:771-775 (Oct.) 1963.

The treatment of the psychiatric patient in the office of the general practitioner creates a number of anxieties. On the one hand, the patient who may be fearful and depressed, approaches treatment with trepidation. The physician, on the other hand, is often too busy or feels too insecure to devote sufficient time and attention to the emotionally troubled patient.

There are no rules of thumb or listings of techniques which would lead to the successful treatment of the psychiatric patient in the office of the physician. Only the communication of feelings of respect, appreciation, and understanding of the patient, i.e., a personal supporting relationship between physician and patient, will produce the desired therapeutic result. Treatment in psychiatry at any level of sophistication is a personal procedure. If the physician is to provide a therapeutic experience for his patient, he must possess sufficient understanding of emotional illnesses to accept the often difficult to understand behavior without criticism or ridicule.

Fortunately, the physician is not alone as he approaches the emotionally disturbed patient on the community level. Rehabilitation of the psychiatric patient requires the professional skills of many disciplines. Cooperation between the physician and other community resources will greatly enhance the therapeutic effectiveness of the physician.

abstracto

CONTE, W. R., E. WOLFROM, AND W. REW. (Division of Mental Health, Washington State Department of Institutions, Olympia, Wash., U.S.A.) Developing uncommon skill with common emotional problems. Northwest Med 62:771-775 (Oct.) 1963.

El tratamiento del enfermo mental, en al consultorio del médico general, plantea una serie de problemas. Por un lado, el paciente, temeroso y deprimido, viene con trepidación. El doctor, por otro, está a menudo muy ocupado o se cree incapaz, consecuentemente no devota el tiempo y la atención necesaria al paciente emocionalmente perturbado.

No hay reglas fijas o listas de técnicas que aseguren el éxito en el tratamiento. Solo la comunicación de sentimientos de respeto, apreciación y entendimiento al paciente, es decir una firme relación inter-personal entre enfermo y doctor puede producir el resultado deseado. El nivel del tratamiento psiquiátrico es decisión personal. Para darle al paciente una real experiencia terapéutica, el doctor ha de poseer un adecuado conocimiento de enfermedades mentales, para aceptar la a menudo difícil de entender conducta, sin criticar o poner al enfermo en ridículo.

Afortunadamente, el médico no está solo, al enfrentarse a estos problemas en la comunidad. La rehabilitación del enfermo psiquiátrico demanda la destreza profesional de diferentes personas. La cooperación entre el médico y otros recursos de la comunidad aumentará significantemente la eficacia del médico general.

Treatment of the psychiatric patient in the office of the general practioner has been the subject of anxiety laden discussions for a long time. The problem, of course, is twofold. On the one hand, the patient who is fearful and depressed, or even overtly anxious, approaches the treatment situation with trepidation. The physician, on the other hand, is often too busy and over-worked or too disinterested to devote sufficient time to the troubled soul before him.

Treatment in psychiatry, at any level of sophistication, is a personal procedure. While drugs, examinations, environmental manipula-

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Mrs. Wolfrom is Supervisor of Psychiatric Social Service, Mental Health Research Institute.

Dr. Rew was Chairman, Executive Committee, Washington State Medical Association at the time this paper was prepared.

tion, and the like, provide some benefits to the patient, the availability of these tools in no way alters the fundamental need of the patient to relate closely to a supporting, understanding figure in his life.

Many questions arise, however, as to how this goal may be accomplished. How may the physician come to understand and support the psychiatric patient for whom he may hold little interest? How may the family doctor overcome some of his own anxieties and culturally inspired attitudes which pertain to the psychiatric patient?

Attitudes are always difficult to change and anxieties are hard to overcome but a new approach is never impossible. As we come to know more about people and their frailties, we can at first tolerate their peculiar behavior and eventually come to accept, support, and respect them.

In this paper we shall attempt to cover three main topics. Firstly, we shall present a brief theoretical discussion about the causation of mental disorders. This section will be directed toward improving the understanding of the psychiatric patient and, hopefully, toward the creation of a more accepting attitude toward the mentally ill.

Secondly, we shall discuss some of the things which the general practitioner can do with the psychiatric patient in his office.

Finally, we shall discuss the role of the physician as a member of the mental health team in which, and through which, he cooperates with other humanitarians who attempt to relieve suffering.

human needs

There are probably as many theories about the development of emotional illnesses as there are people who attempt to explain them. Each author, also, is guilty of having his own peculiar method of presentation. Although this subject does not lend itself well to brevity, the following paragraphs reflect a theoretical explanation of the development of emotional disorders which might prove beneficial to the general practitioner as he tries to understand better the psychiatric patient in his office.

We have come to recognize that emotional illnesses have their origin in conflicts. "Conflict" is a good term because it implies a clash of ideas, philosophies and hopes. Man is made up of needs. Some of these motivate the life preserving forces within him. Others help him maintain his identity as a human being. Still other needs represent his ambitions in relationship to people. While it is difficult to say which of his needs is the most important, there is little question but that his needs to relate positively to people, to be accepted by them and to give and take in interpersonal relationships are the needs which are the most difficult to satisfy in our culture.

Whenever anything prevents the accomplishment of these satisfactions, i.e., when one cannot find the satisfaction for his pressing needs, the individual is in conflict with those forces which seem to work against his finding pleasure. If he can overcome the forces opposing him, then all is well. But, if the individual is the loser, then a series of emotional reactions develop. For instance, he first experiences a profound frustration, that is, a sense of not being able to win. Then there comes the feeling of anger which inevitably is associated with failure.

hostility leads to anxiety

Anger, or hostility as we usually refer to it, creates a new and difficult problem. Our society cannot accept hostile feelings, particularly when the feelings are very strong. In fact, we have come to view hostility as dangerous; we even legislate against it! Thus, the development of anger which is inevitable and understandable in the face of frustration places the individual in further jeopardy; it places him in overt conflict with his society. This is frightening and we describe his apprehensive state as "anxiety."

It is around this nucleus of anxiety that we see the development of the particular psychiatric problem. Anxiety is difficult to live with because it is so painful. When anxiety is pressing, the personality cannot long endure. Thus, the individual, consciously, or more often at an unconscious level, finds ways of dealing with the uncomfortable anxiety problem.

So far in this discussion we have seen that the people who ultimately develop emotional problems have experienced a basic conflict in which some pressing need has gone unsatisfied. As a result of this situation the individual has felt inadequate and angry. The anxiety which he experiences is intensive, painful and must be dealt with. The particular psychiatric disorder which evolves, and with which the general practitioner is confronted, is a defense against the anxiety problem.

a way of escape

The personality has found ways of dealing with the anxiety which are less troublesome and less painful than dealing with the anxiety itself. It is difficult to understand that a patient who is aloof, restricted, depressed, delusional, hallucinated, or who has any one of a number of physical symptoms that are not founded in organic disease is actually more comfortable than he would be if he were to deal directly with his basic problem. But the personality, always concerned about the economics of the emotional side of life, has found that the use of the symptoms of the several psychiatric disease entities supports the integrity of the personality and makes life a bit easier.

Thus, the physician who deals with the psychiatric patient in the private office must come to see the patient as anxious, troubled, and complaining of symptoms which defend him against his primary problem. Often the symptoms divert the attention of the patient and his doctor from the true problems which present themselves.

tolerance and understanding

In acquiring a new attitude toward the emotionally disturbed patient, it is imperative that the physician become tolerant of his patients. To be offended by the hostility which inevitably creeps into the situation, is to deny that there are basic problems underlying the hostility that must first be met. To be irritated with the several symptoms which the patient presents, is again to lose sight of the underlying problem. To be fearful of the patient is to see him as a threat rather than a human being who is frightened and dependent. It can be safely stated that the physician who sees the anxiety laden patient in his office must approach that patient with understanding, must see him as a fellow human being who is in trouble and who is frightened, and must accept him as an individual in need of recognition and support rather than as one who needs to be shunned, punished or denied.

To treat the psychiatric patient in the office means to meet the unsatisfied needs, to assist in the self understanding which the patient may acquire, and to give enough support to help the patient re-establish his contacts with his fellow men.

there is a method but no rule

We wish it were possible to list in numerical fashion some techniques or rules of thumb which, if skillfully employed, would lead to the successful treatment of the patient in the office of the physician. This unfortunately, is not possible. What is possible, however, is a discussion of the role of the physician as he relates himself to the emotionally disturbed patient.

If we can accept the theory that the psychiatrically ill are insecure, anxious and depressed, that they feel isolated and unworthy, and that their difficulties in relating to people are profound, the role of the physician as a counselor and strong supporting figure is quite clear. When the physician listens to the patient and accepts his anxieties without ridicule or resentment, he conveys to the patient the idea that his doctor views him as a troubled individual who is worthy of time and attention, and as a fellow human being whose suffering is of great concern to his doctor. To convey this message to an individual who has never before known a comfortable supporting relationship is to give him a gift of love and respect. On this basis, life becomes meaningful, reasonable, and filled with hope.

Communication between the emotionally disturbed patient and his doctor is sometimes difficult to establish. But, with a willingness on the part of the physician and sincere encouragement from him, relatedness becomes possible.

As the patient expresses his feelings, he actually has an opportunity to "hear himself talk." This introspection can lead to an improved self-understanding and, because the doctor is a good listener, he can make some interpretation to the patient which may add immeasurably to this understanding. Certainly, insight is helpful. The unknown is always frightening. To know more about oneself is anxiety relieving.

meeting hostility

At times, because of the patient's angry feelings and his disappointment in earlier relationships, he may become abusive, feel that his doctor is against him, or behave in ways that are rather unpleasant. If the physician has acquired enough knowledge about emotional illnesses and if he is personally secure, he will be able to meet this hostile attack with understanding and kindness. To do so is to be therapeutic. To counter hostility with hostility is to perpetuate the patient's difficulties in relating.

The physician, of course, assumes his traditional role as the examiner and the prescriber, but these characteristics are so much a part of the physician that they need not be discussed here.*

In the past, when our population was smaller and pressures not as great, family physicians tended to be all things to all people. But, the world has become highly specialized and very complex, and today the total treatment services in psychiatry include ministerial counseling, vocational training and rehabilitation, recreational opportunities, as well as assistance from various health and social agencies.

When the family physician was the only resource to which the patient and his family could turn during a period of crisis, the doctor was fortunate in that he knew the total family and its strengths and weaknesses. Today however, this total view is usually lacking. In emotional illness a gap in knowledge could be a real hindrance in helping the patient with his problem. In fact, it is rare, indeed, that the "identified" patient within a family group is the only one needing understanding and treatment.

a supporting team is ready

The physician, as a part of the total family of services, is in a position to recognize the needs of his patients and their families and to make appropriate referrals.

We wish there were an easy way to learn about resources within one's community. The fact is, however, that just as medicine has become specialized and complex, so have the various resources within the community. Referral procedures would be simplified if there were a central coordinating person or agency in the community, but this is often not the case. It behooves physicians, therefore, to learn all they can about their communities. This knowledge can be of benefit to patients whether they are suffering from an emotional or a physical illness!

Fortunately, in every community there is at least one agency that can be of help to the physician as he cares for emotionally disturbed patients in his office. Even in sparsely settled counties there are public health nurses and public assistance offices. Both of these agencies make it a part of their responsibility to know what is available and the specific eligibility requirements for service, whether this be vocational help, ministerial counseling, recreational opportunities, social agency service, or the like.

It is asking too much to expect an insecure patient, already frightened by his poor interpersonal relationships, to go from agency to agency until he finds the one that is appropriate for his needs and for which he is eligible.

Since the physician can get into difficulty by identifying too closely with the patient member of a family, it is of prime importance that he keep his thinking objective as he evaluates the total family group. Again this may call for cooperative discussions with another professional person in a health or social agency who may know the other members of the family or who may be the best referral source for help to the other family members. Referral to an allied professional on the mental health team for help for a family member other than the patient may be among the more important services the physician can accomplish on behalf of his patient.

blending available skills

Occasionally, professional orientations and experience get in the way of cooperative work on behalf of a patient. Physicians are so accustomed to being in charge of the patient's care that they inadvertently may create difficulty by telling other members of the treatment team what to do for the patient or his family. Communication with other professions is a two-way street. It involves the art of listening as well as talking, and it becomes a sharing of information on behalf of the person or persons involved. Effective communication among team members is dependent on mutual respect for professional roles, training and performance.

Sometimes physicians hesitate to cooperate because they consider communication about a patient to be a violation of professional confidence. This need not be a worry since in planned referrals it is important to get the patient's consent. No social agency, no minister, no recreational therapist, should want to become involved in helping the patient without that patient's participation. Thus, any hesitancy based on a fear of violating a professional confidence is unnecessary.

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* The reader is directed to an extremely fine article by Herman Hirsh entitled "The General Practitioner and the Former Mental Patient" in GP, March, 1963. Dr. Hirsh has discussed the role of the general practitioner as it pertains to the former mental patient with special emphasis on the traditional role which the physician holds. His suggestions concerning the handling of questions frequently asked by former patients should be very helpful to the physician.

With a cooperative approach, communications between one profession and another can be comfortable and mutually rewarding. It makes it possible for the family physician to be recognized by patients, families, and the whole community as a working part of a team of resources ready and able to participate in alleviating the stresses of an emotional illness. ■

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Stokes-Adams Disease

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Seattle, Washington

Stokes-Adams disease refers to recurrent attacks of transient cerebral ischemia that are caused by ventricular asystole in association with chronic atrial ventricular heart block.[1] The symptoms of of Stokes-Adams attacks may be momentary faintness and dizziness, syncope, or loss of consciousness followed by convulsions. They are due to a sudden decrease in cerebral blood flow resulting from the inadequate cardiac output of ventricular asytole. The occurrence and severity of these symptoms depend upon certain variables[1]—the abruptness and duration of the asytole, the position and activity of the body, and the condition of the cerebral vessels.

duration

Duration of asystole is the most important variable as it is more directly related to the Stokes-Adams attacks. The longer the period of asystole the greater the incidence of attacks and the more severe the symptoms of an attack. Ventricular asystole usually varies from 3 to 15 seconds but may be longer. Body position and activity refer to whether erect or recumbent and whether motionless or active. Both the erect position and being motionless enhance the severity of an attack. Involvement of cerebral vessels with arteriosclerosis increases the severity of symptoms. The combination of cerebral arteriosclerosis and the erect position in association with ventricular asytole have a particularly adverse effect. There will be a higher incidence of the more severe symptoms as well as a greater number of attacks since both will occur with shorter periods of asystole. Stokes-Adams attacks are commonly more frequent and more severe in older individuals, especially if they have a tendency to stand motionless. Depending upon the several variables and their combination, the symptoms of a Stokes-Adams attack or seizure may be of increasing severity. However, the predominant determinant of the severity of symptoms is the directly related duration of asystole.[2] Ventricular asystole of 3 to 5 seconds duration may produce momentary faintness and dizziness. The syncope range is 5 to 10 seconds and after 10 seconds, clonic convulsive movements may follow loss of consciousness.

mechanism

The mechanism of asystole is usually ventricular standstill but may be ventricular fibrillation, flutter or tachycardia.[1,3] These undesirable cardiac mechanisms result from unpredictable behavior of the idioventricular pacemaker. There may be a delayed pacemaker response as well as depression or acceleration of the pacemaker. Ventricular standstill may be caused by either a delayed response or a depressed pacemaker whereas an accelerated pacemaker produces ventricular fibrillation, flutter or tachycardia.

These asystole mechanisms in Stokes-Adams disease occur mainly under two conditions.[1-3] The more frequent situation is during the transition from partial to complete AV block. Here the response of the idioventricular pacemaker is delayed, producing ventricular standstill. The

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Read before Section on Surgery, Washington State Medical Association, Annual Meeting, Spokane, Washington, September, 1962.

other situation occurs during constant or fixed complete AV block when spontaneous depression or acceleration of the idioventricular pacemaker produces standstill or fibrillation.

Stokes-Adams disease is seen mainly in older individuals with arteriosclerotic heart disease or calcific aortic stenosis or both.[1-4] The underlying pathological process involving the AV node and bundle of His is usually fibrosis secondary to the ischemia resulting from coronary atherosclerosis. Occasionally the process may be calcification extending from the aortic valve area.

abstract

HUGHES, M. L., R. L. KING, AND G. H. LAWERENCE. (Departments of Medicine and Surgery, The Mason Clinic, Seattle, Wash. U.S.A.) Stokes-Adams Disease. Northwest Med 62:775-780 (Oct.) 1963.

The occurrence and severity of Stokes-Adams symptoms depend upon the duration of asystole. The longer the period of asystole, the greater the incidence of attacks and the more severe the symptoms. Ventricular asystole usually varies from three to fifteen seconds, but may be longer. The mechanism of asystole is usually ventricular standstill but may be ventricular fibrillation, flutter, or tachycardia. These undesirable cardiac mechanisms result from unpredictable behavior of the idoventricular pacemaker

The two therapeutic aspects of Stokes-Adams disease are: 1) resuscitation from an attack, 2) prevention of recurrent seizures.

Resuscitation can be accomplished by external electrical stimulation and external countershock defibrillation. Preventing recurrent attacks remains the major problem requiring a combined medical-surgical approach for its solution. Sympathomimetic amines are the mainstay of medical therapy. Oral ephedrine, sublingual and oral isoproterenol frequently provide highly effective therapy when attention is given to the proper dosage schedule.

For assured prevention of seizures, the unreliable, intrinsic, ventricular pacemaker must be replaced by a reliable one to drive the ventricle continuously and indefinitely. The external electric pacemaker is impractical for long-term use. Implantation of myocardial electrode and connection to a subcutaneous pacemaker, provides prolonged, direct cardiac stimulation.

In the combined medical-surgical approach to the management of Stokes-Adams disease, medical measures to prevent recurrent seizures are given an initial, thorough trial. Recent attacks and chronic cardiac decompensation, despite adequate medical therapy, are both indications for the surgical approach.

abstracto

HUGHES, M. L., R. L. KING, AND G. H. LAWERENCE. (Departments of Medicine and Surgery, The Mason Clinic, Seattle, Wash. U.S.A.) Stokes-Adams Disease. Northwest Med 62:775-780 (Oct.) 1963.

La ocurrencia y severidad del "Stokes-Adams" son contingentes a la duración de la asistolia. A mas largo período de asistolia la mayor frequencia de los ataques y la mayor severidad de los síntomas. La asistolia ventricular generalmente varía entre tres y quince segundos, pero puede ser mas larga. La asistolia generalmente es debida al paro ventricular, pero también puede ser el resultado de la fibrilación, el "flutter" o la taquicardia. Estos indeseables mecanismos cardíacos resultan del erratil comportamiento del "pacemaker" ideoventricular.

Los dos aspectos terapéuticos del síndrome de "Stokes-Adams" son: 1) terminación del ataque y 2) prevención de ataques subsecuentes.

La terminación del ataque se puede lograr con estimulación eléctrica externa y "countershock" defibrilación externa. La prevención de ataques recurrentes sigue siendo el problema mayor y requiere combinado tratamiento medico-quirúrgico para su solución. Las aminas simpaticomiméticas son el baluarte del tratamiento médico. Efedrina, por vías oral y sublingual y isoproterenol, oral, a menudo proveen una terapia muy eficaz, aunque mucha atencion ha de darse al apropiado plan de las dosis.

Para asegurar prevención de los ataques, el errátil, intrínsico "pacemaker" ventricular, ha de ser cambiado por uno confiable que estímule al ventriculo continua e indefinidamente. El "pacemaker" eléctrico externo es impráctico para uso prolongado. Implantación de un electrodo en el miocardio, conectado a un "pacemaker" subcutáneo provee estimulación cardíaca prolongada y directa.

En la terapia de la enfermedad de "Stokes-Adams", medidas médicas se emplean inicialmente, dandoseles una concienzuda prueba. Ataques recientes e insuficiencia cardíaca crónica, a pesar de adecuada terapia medica, son indicaciones para el tratamiento quirúrgico.

Table 1
Therapeutic aspects of Stokes-Adams Disease

Resuscitation from current attacks
- 1. External electrical procedures
  - a. pacemaker: standstill
  - b. defibrillator: flutter, fibrillation

Prevention of recurrent seizures
- 1. Drug therapy
  - a. sympathomimetic amines
- 2. Electrical stimulation
  - a. external pacemaker
  - b. internal pacemaker

management

The therapeutic problems in Stokes-Adams disease have two main aspects—resuscitation from a current attack and prevention of recurrent seizures.[5,6] (Table 1) Resuscitation from ventricular standstill, tachycardia and fibrillation can be accomplished by external electrical stimulation with a pacemaker and external countershock with a defibrillator. Preventing recurrent attacks remains the major problem. Drug therapy, especially with the sympathomimetic amines, is valuable and effective in this regard and remains the mainstay of prevention. However, intractable patients are seen and medical therapy for them is less than completely satisfactory. The external pacemaker can be used for such preventive purposes only a relatively short period of time. Recently there has been renewed interest in the prevention of attacks of Stokes-Adams disease. This renewed interest has been due to the development of an internal pacemaker[6,7] with a suitable myocardial electrode[6,8] for prolonged, direct, cardiac stimulation. The newly developed internal pacemaker has made possible a surgical approach to the prevention of recurrent attacks.

drugs

The various drugs used in the therapy of Stokes-Adams disease are the sympathomimetic amines, vagolytic drugs, potassium decreasing drugs and digitalis preparations. The sympathomimetic amines are the mainstay of medical therapy with isoproterenol, ephedrine and epinephrine being the drugs of choice. These medications stimulate the myocardium producing primarily increased rhythmicity but also producing myocardial irritability. They are useful only when the cardiac mechanism is ventricular standstill, since in this situation the increased rhythmicity will arouse, accelerate and maintain the ventricular pacemaker. The increased myocardial irritability from these drugs may yield the undesirable ventricular arrhythmias of ectopic beats, tachycardia and fibrillation. When the mechanism of asystole is ventricular tachycardia or fibrillation, the sympathomimetic amines are of no benefit. In this situation these drugs may even be harmful, since the increased myocardial irritability would enhance the fibrillation or tachycardia. At present, there is no satisfactory drug available for the prevention of attacks due to ventricular fibrillation, flutter or tachycardia.[5]

The vagolytic drugs are rarely helpful in complete AV block and only occasionally are they of benefit in partial block. Atropine acts to inhibit vagal reflexes which increase the block at the level of the AV node.

Chlorothiazide[9] and prednisone[10] may prove to be useful through the increased excretion of the myocardial depressant, potassium. This is an indirect method of stimulating the myocardium. Molar sodium lactate[11] also indirectly stimulates the myocardium through an obsure mechanism related to alkalosis and electrolyte alteration including decreased serum potassium. In general, molar sodium lactate is less effective than the sympathomimetic amines.[5]

Digitalis preparations are used when congestive heart failure complicates Stokes-Adams disease. In this situation, the increased force of systolic contractions and the enhanced myocardial efficiency produced by these drugs counteract their possible depressive action on the conduction system.

Myocardial depressant drugs, such as quinidine, procaine amide and potassium, are contraindicated in Stokes-Adams disease and high degree AV block.[1-3] This is true no matter which one of the cardiac mechanisms is responsible for the asystole.

Drug therapy in preventing Stokes-Adams attacks does not meet with complete success in all patients. However, sublingual and oral isoproterenol and oral ephedrine provide highly effective prevention when attention is given to their proper administration. The sublingual and oral administration of these two amines remains the preferred form of initial treatment as well as being the established method for long-term management.[5,12] The majority of patients with Stokes-Adams disease can be successfully treated in this manner. (Table 2)

Sublingual isoproterenol is given as one 10 mg or 15 mg tablet every one to six hours with the usual dose being 15 mg every four hours.[12] Oral isoproterenol is recommended as one 30

Table 2

Administration and dosage of sympathomimetic amines in Stokes-Adams disease

- ephedrine
  - oral (25 to 50 mg) t.i.d. or q.i.d.
- isoproterenol
  - sublingual (15 mg) q 1 to 6 hours
  - oral sustained action (30 mg) q 4 to 6 hours
  - subcutaneous or IM (0.2 mg) q 1 to 4 hours
  - IV (dilute solution) 2 to 5 mg per liter
- epinephrine
  - subcutaneous or IM (0.3 to 0.5 mg) q 1 to 4 hours
  - IV (dilute solution) 2 to 5 mg per litter

mg sustained action tablet every four to twelve hours with the average dose being one tablet every six hours. Oral isoproterenol as compared to sublingual administration is reported to maintain a more stable cardiac mechanism at an increased rate with fewer side effects.[12] However, the oral tablet has only recently become available and as yet has limited clinical evaluation. Oral ephedrine is prescribed in doses of 25 mg to 50 mg four times a day. If more than 200 mg per day is given, paradoxical myocardial depression may occur. Frequently, a short-acting barbiturate, such as pentobarbital or amobarbital, is combined with ephedrine to offset its central nervous system stimulation. It may be that only one of these sympathomimetic amines will be necessary to prevent attacks or it may require a combination of both drugs. Ephedrine and oral isoproterenol may be taken at the same time but sublingual isoproterenol is prescribed to take beween the ephedrine doses. Other pharmacologic agents, such as the potassium-decreasing drugs, may be used in conjunction with the epinephrine-like medications.

When Stokes-Adams attacks continue despite the maximum amount of sublingual and oral amines, parenteral therapy with isoproterenol or epinephrine is indicated.[12] The subcutaneous or intramuscular injection of these two drugs is effective at a dose of 0.2 mg isoproterenol every one to four hours and 0.3 mg to 0.5 mg of epinephrine every one to four hours. Although this form of parenteral therapy is useful, the situation is usually more rapidly controlled and stabilized with continuous intravenous infusion of dilute solutions of either amine.[5,12] Initially, 2 mg of either isoproterenol or epinephrine is added to 500 cc of 5 per cent glucose solution and the rate of flow adjusted to maintain the ventricular rate at around 40 beats per minute. The desired flow rate is not over 20 drops per minute making it necessary to concentrate the solution with additional drugs. When idioventricular rates rise above 50 beats per minute they predispose to lethal arrhythmias.

Epinephrine and isoproterenol differ in their effects on blood pressure and the higher pacemakers. Because of these differences, one drug may be prefered over the other in certain circumstances.[5] Blood pressure is elevated by epinephrine while isoproterenol usually has no effect on blood pressure or occasionally can cause a slight drop. Therefore, with high blood pressure, isoproterenol is the drug of choice and when the blood pressure is normal or low, epinephrine is preferable. Isoproterenol accelerates the high pacemakers, such as the sino-auricular node, to a greater degree. If the AV block decreased during therapy, the increased atrial rate would be transmitted to the ventricle producing a sudden rapid response. Therefore, epinephrine should be used when a less degree of AV block has recently been present. Both of these drugs may produce potentially fatal ventricular arrhythmias although it has been suggested that isoproternenol has less tendency towards such toxic action.[12] At the present time, this point remains unsettled.

positive control

Despite the available pharmacologic measures, some attacks of Stokes-Adams disease due to ventricular standstill continue to recur and may be fatal. In addition, those seizures due to ventricular tachycardia, flutter or fibrillation are not prevented by any pharmacologic agent available Today. Therefore, for assured prevention of seizures, whether due to ventricular standstill or fibrillation, the unreliable idioventricular pacemaker must be replaced by a reliable extrinsic electric pacemaker to drive the ventricle continuously and indefinitely.[6] External electrical stimulation, the endocardial electrode and the percutaneous placed myocardial electrode are important for short-term use.[6] The last two techniques involve direct electrical stimulation with the electrode being either in or on the heart. This obviated some of the difficulties of the external electric pacemaker but other severe limitations for long-term use remained. However, the recent implantation of a myocardial electrode at thoracotomy and the connection to a subcutaneous pacemaker removed these limitations and provided a potentially permanent electric cardiac pacemaker.[7]

Over the past three years, increasing numbers of these potentially long-term pacemaker electrode units have been surgically implanted in intractable Stokes-Adams disease.[13-16] The preliminary reports from these various centers have been favorable with the mortality around 10 per cent and decreasing with experience. Initially, complications and morbidity ranged as high as 30 per cent but with the expected technical refinements they have decreased to less than 10 per cent in the more recent cases. Rehabilitation has occurred in over 80 per cent of the patients.

Over one-half of the implanted pacemaker elecrode units have been in successful operation from one to three years. This indicates that the major problem of a rising threshold for stimulation has been solved to some extent. This solution involved the use of special bipolar myocardial electrodes (stainless steel, pure platinum),[8,16] suitable insulators (silicon, Teflon)[7,16] and careful implantation to avoid tissue reaction.

The primary indication for the surgical implantation of the pacemaker electrode unit is intractable Stokes-Adams disease.[13-16] (Table 3) Satisfactory management of recurrent attacks requires a combined medical-surgical approach. Medical measures to prevent recurrent seizures should be given a thorough trial. Recent attacks despite adequate medical therapy indicate surgical intervention. Since a prominent clinical feature of Stokes-Adams attacks is a striking unpredictability, the need for surgical intervention may occur abruptly. This fact necessitates that the hospital management of these patients be a highly coordinated, joint affair. The related roles of the medical man and surgeon in this situation is somewhat analogous to their function in the management of upper gastrointestinal bleeding.

Table 3
Indications for surgically implanted long-term electric pacemaker

1. Intractable Stokes-Adams disease
2. Complete heart block with congestive heart failure and limited physical activity

There may be a second but less frequent indication for a surgically implanted electric pacemaker.[6] (Table 3) The fixed ventricular rate in complete heart block may prevent Stokes-Adams attacks but it may also adversely effect cardiac function. Cardiac hypertrophy and decreased exercise tolerance frequently occur and congestive heart failure often developes. In patients with limited physical activity and congestive heart failure, this surgical procedure may occasionally be indicated to increase the ventricular rate and to improve cardiac function.

Within the past year, we have seen six patients with chronic AV heart block and recurrent Stokes-Adams attacks. These patients were referred as possible candidates for the surgically implanted pacemaker. In five patients, the recurrent attacks were prevented with institution of adequate medical therapy. These patients have continued to be free of attacks on maintenance medication. A 66-year-old male with nonpreventable attacks underwent left thoracotomy for implantation of the myocardial electrodes and pacemaker. The implanted unit consisted of Teflon-insulated platinum electrodes and subcutaneous pacemaker designed by Zoll and his associates.[16] The postoperative course was uneventful and the pacemaker electrode system has continued to function satisfactorily at the fixed ventricular rate of 74 beats per minute over the past eight months. There have been no recurrent Stokes-Adams attacks, no complications and the patient has returned to his former employment as a music teacher.

summary

Ventricular asystole associated with AV heart block is the mechanism producing syncopal attacks. Resuscitation from a Stokes-Adams attack can be readily accomplished by external electrical means. Prevention of recurrent attacks remains the major therapeutic problem. Drug therapy in the form of the sympathomimetic amines prevents recurrent episodes in the majority of patients. Surgically implanted long-term electric pacemakers have been successfully used in patients intractable to medical therapy. With the availability of such pacemakers, there is now need for a combined medical-surgical approach to the problem of preventing the recurrent attacks of Stokes-Adams disease. (Table 4) ■

Table 4
Summary of Major Points in Stokes-Adams Disease

1. Diagnostic Findings—AV Block, Asystole Syncope
2. Electric Resuscitation—Readily Accomplished
3. Prevention of Attacks—Major Problem
4. Drug Therapy (Sympathomimetic Amines) — Effective in Most Patients
5. Surgically Implanted Electric Pacemaker—Successful in Intractable Disease
6. Available Long-Term Pacemaker—Indicates need for a Combined Medical-Surgical Approach to the Problem of Previous Recurrent Attacks

1118 9th Avenue (1) (Dr. Hughes)

addendum

With increased experience, the various medical centers now report the risk of surgically implanting a long-term pacemaker to be about one per cent and the complication rate to be less than 10 per cent. Over 95 per cent have been free of recurrent Stokes-Adams attacks. We have had a similar experience. Over the past 10 months, an additional six patients have had a surgically implanted pacemaker. There has been no mortality and only one complication in the total of seven patients. Replacement of the entire electrode pacemaker unit was necessary in one patient because of a broken connecting wire. Six patients with intractable Stokes-Adams disease have had no recurrent attacks and the one patient with complete heart block complicated by congestive heart failure and limited physical activity has demonstrated both subjective and objective improvement.

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Research at the University of Oregon Medical School

Inasmuch as medical practice is conducted by physicians using the same tools and the techniques utilized for investigation, it became apparent many years ago that medical students must be taught in an atmosphere of research if they are to be successful in caring for the needs of their patients.

For this reason programs of medical research at the University of Oregon Medical School have been an important part of campus activities, almost from the time the institution was founded in 1887. These investigative activities continue to play an increasing and vital role in the School's educational program, as well as contributing to treatment of disease and alleviation of human suffering.

More than 200 individual research projects are now being conducted on the School's hilltop campus, many of them in the nine-story Medical Research Building which was opened last December.

The School's research contributions have received national attention and attracted outstanding faculty to its staff. Investigative activities at the School have expanded with the growth of national interest in medical research and the increased support by health agencies, individuals and foundations as well as the Federal government. A decade ago the institution received $100,000 for research. During the past fiscal year it was awarded over $4.6 million.

Research support is primarily from non-state funds. For example, in the 1961-62 fiscal year, federal grants accounted for 84.4 per cent of the total, private grants for 13.7 per cent and state funds 1.9 per cent.

During its 75-year history the School has recorded a number of medical firsts. Among these are: establishment of the first colony of short term cultures of human marrow cells, in 1936; treatment of chronic leukemias by titrated, regularly spaced, total-body x-ray irradiation in 1941; establishment of the first successful culture of cells from human leukemic blood, in 1954; discovery of an abnormal hemoglobin that causes anemia, in 1955; use of low-fat diet to treat multiple sclerosis, in 1956; development of occlusion aortography and a test to diagnose metachromatic leuko-dystrophy, in 1957; and a new method of testing blood compatability which cut testing time by more than an hour, in 1959.

The School, recognized as one of the world's leading cardiac and treatment research centers, pioneered cardiac valve replacement. It was here in 1960 that the first successful artificial mitral-valve was developed and implanted in a patient. Since that time, the same surgery-engineering team has developed a similar successful aortic prosthesis and several multiple valve replacements have been performed at the institution. This year, for the first time in medical history, the team successfully implanted three artificial valves into the heart of one patient. The institution's advances in cardiology and cardiac surgery were acknowledged with a $5.6 million seven-year grant from the Public Health Service in 1961 for the establishment of a cardiovascular research program.

A cardiac, post-operative, intensive study center, staffed with specially trained personnel, contains the most modern equipment available for care and study of patients during the post-surgery period. Soon to be installed in the Medical School Hospital is a $474,000 Cardiac Catherization Contrast Visualization Laboratory. It will be the only such coordinated laboratory in the nation.

In 1961, the Medical Research Foundation of Oregon acquired an 180-acre farm for the Medical School's use in housing and breeding animals for teaching and investigative programs. There are currently about 400 animals housed at the farm, including cats, dogs, goats, pigs and horses. Some 6,000 animals, mostly rats and mice, are housed in the first two floors of the new Medical Research Building.

"A continued increase in investigative studies at the Medical School is planned for the future," reports D. W. E. Baird, Dean. "By teaching students the art and science of medicine in an atmosphere of research, the faculty is able to illustrate to them the application of investigative techniques and procedures. This in turn stimulates student curiosity by developing new ideas and opening up new channels of thought. These are the important ingredients to the successful practice of medicine. And while this educational process is going on, important contributions are being made in the field of medicine."

The following brief resumes are representative of research at the School. This, of course, is not a complete list, but rather a selection of reports which the various departments and divisions felt would be of interest to physicians in general.

DEPARTMENT OF RADIOLOGY

CHARLES T. DOTTER, M.D. and
MASAO TAMAKI, M.D.

Contrast visualization of a periatheromatous cleavage plane.

Support: NIH

The frequently loose attachment between atheromas and the surrounding arterial wall accounts for the crescentic "separation" artefacts often observed in cross-section tissue preparation and explain the ease of core removal at endarterectomy. Hemorrhage into this potential space may cause the abrupt appearance of serious arterial obstruction as an unexpected complication of asymptomatic preexisting vascular disease.

When it was recognized how readily this periatheromatous cleavage plane could be entered inadvertently or intentionally during arterial catheterization, a retrospective review of films made during various types of arterial contrast visualization was undertaken. Over 15 examples were found where contrast substance had entered and revealed an extraluminal intravascular space. At the time of original study these had either been overlooked or erroneously interpreted as "intramural" or "extravascular" infiltrations. The opacity of periatheromatous filling disappears in a matter of seconds after the loss of luminal opacity unlike that resulting from true intramural or extramural injections. Intraluminal catheter injections have on several occasions provided unmistakable evidence of extraluminal but intravascular detours taken by advancing catheters prior to their re-entry into the arterial lumen. In approximately 1,000 percutaneous retrograde arterial catheterizations we have not seen an instance of gangrene or other evidence of dislodgement of atheromatous material. Post-morten correlation studies are continuing and have provided further encouragement for efforts to develop instruments and a catheter technic for relatively atraumatic, transluminal endarterectomy.

DEPARTMENT OF OBSTETRICS AND GYNECOLOGY

FRANK SHUBECK, M.D.

Fetal and uterine physiology by electronics.

Support: NIH

The fetal heart rate and rhythm are the only currently reliable indicators of fetal homeostasis during pregnancy and labor. Aural, stethoscopic methods at times have yielded controversial, questionable or even totally false results leading to inappropriate management of the pregnancy or to considerable anxiety to the patient or her physician or both. Development of newer, better methods is always essential. Consequently, the electrical or sonic energy of the fetal heart are used as signal sources. Appropriate, special electrodes or transducers are applied to the maternal abdomen or directly to the fetus to detect these minute energies, transmit them to suitable electronic devices for amplification and elimination of artifacts that produce distortion, and present the signal visually either on an oscilloscope screen or on graphic paper. Each heart beat of the fetus (and its mother when this is desirable) is immediately recorded, counted and the graphic presentation analyzed for rhythm. Attempts are being made to use the fetal heart energy in a continuous monitoring system, an alarm alerting the attending personnel when the rate falls outside of arbitrarily preset limits.

Analysis of our nearly 700 cases has shown that these methods often yield valuable information about the fetus when other clinical or laboratory means fail. Our results indicate that fetal electrocardiography is an extremely useful adjunct for clinical evaluation of many pregnancy and labor situations, such as the detection of fetal life before the 20th week of gestation or in the markedly obese patient, multiple pregnancy, fetal death, etc. Abnormal rates encountered during labor have been found to be associated with prolapsed cord, vasa preavia, abruptio placentae and prolonged labor. Coupled with all other clinical data concerning many problems, the precise knowledge of the fetal heart determined by fetal electrocardiography has led to earlier interference at times and to watchful expectancy at others. A total result has been the improved management of our obstetric patients.

DEPARTMENT OF OPHTHALMOLOGY

VIRGINIA WEIMAR, PH.D., MARVIN HINES, PH.D., KENNETH SWAN, M.D., LEONARD CHRISTENSEN, M.D., ROBERT BURNS, M.D. and ROBERT HILL, M.D.

Support: NIH, Research to Prevent Blindness, Knights Templar Eye Foundation, Medical Research Foundation of Oregon.

Reaction of the ocular tissues to injury is being investigated with a multi-discipline approach in both laboratory and clinical phases. Dr. Weimar is studying, at the cellular level, the mechanism of activation of cells by injury to the cornea, a particularly advantageous tissue for study of wound repair because it is avascular. Her studies indicate that in the latent phase of wound repair, the involved cells are developing their enzyme machinery preparatory to synthesis of new connective tissue. Enzymes not normally present develop in the corneal stroma 12 to 18 hours after injury. The epithelium plays an important role in their development and later fibroplasia.

Drs. Swan and Christensen also have been concerned with fibroplasia and its relationship to the complications of ocular surgery. Reaction studies of the reaction of various tissues as well as types of injury such as those induced by diathermy have led to modifications of surgical techniques used in ophthalmology.

Drs. Burns and Hines are studying a new form of unilateral reversible cataract, which develops as a reaction to the stress of anesthesia and hypothermia, plus the open eyelid mechanism. Dr. Burns also has induced specific viral and granulomatous inflamations in the cornea to serve as experimental models for evaluating therapy of these clinically important disease processes. Dr. Hill, working in cooperation with NASA, is developing electronic techniques of detecting reactions of the ocular coats of the eye and the intraocular circulation to external physical stress.

DEPARTMENT OF PUBLIC HEALTH AND PREVENTIVE MEDICINE

HAROLD T. OSTERUD, M.D.

Support: NIH.

A study of congenital heart disease in Oregon for 1957 through 1961 is in progress using data from approximately 185,000 official birth records and 86,000 death certificates. Information from records identifying congenital malformations is supplemented by clinical records and by autopsy reports for individuals who died. The purpose is to establish the recorded incidence of congenital heart disease, to identify its association with other congenital malformations, and to study its distribution in contrasting population groups.

Some initial observations are of interest. Congenital heart disease was recorded more frequently for males than females by a ratio of three to two. A similar sex difference is noted for congenital malformations of the digestive and genito-urinary systems but not for the nervous, musculo-skeletal or respiratory systems.

Occurence of congenital malformations was not related to birth order nor was age of the mother a factor except in the case of mongoloid children. The mean age of mothers who bore mongoloids was significantly higher than for those who did not. This is in accord with the findings of others.

The occurrence of congenital heart disease in mongoloids was high, 30 per cent or more. Of the 79 mongoloids born during the period under study, 26 died as a result of congenital heart disease, 3 of other causes.

Of all deaths attributed to congenital malformations, 52 per cent resulted from congenital heart disease.

Seventy-two per cent of the 521 deaths attributed to congenital heart disease occurred during the first year of life, 11 per cent during the first 24 hours.

DIVISION OF ENDOCRINOLOGY

MONTE GREER, M.D.

Support: NIH

Studies are being made of the role of the central nervous system in the control of endocrine function. Various parts of the brains of laboratory animals are destroyed or stimulated and the resultant effect on the secretion of ACTH, TSH and gonadotropins assessed. In some cases almost the entire brain is removed, leaving the pituitary in situ.

All the forebrain except the hypothalamus can be removed without depressing the ability of the pituitary to secrete TSH or ACTH. However, once the hypothalamus itself is destroyed, these hormones cannot be produced in normal amounts. Other areas of the brain contribute modulating influences, probably through the hypothalamus, on the secretion of ACTH. Stimulation or destruction of localized areas of the central nervous system in animals in which the remainder of the brain is left intact will cause increases or decreases in the secretion of ACTH in response to a standard traumatic stress.

DIVISION OF RHEUMATOLOGY

DANIEL BACHMAN, M.D. and BELLE DRAGOON, B.A.

Support: Medical Research Foundation of Oregon.

Blood from patients with connective tissue diseases is incorporated into agar media in a special type of growth tube, after which various biochemical mutants of the microorganism *Neurospora crassa* are inoculated on the media. Growth rates and germination times of the biochemical mutants as influenced by blood from patients with connective tissue diseases are compared with normal controls.

Several, but not all, of the different biochemical mutants behave differently in the presence of blood from patients with connective tissue diseases as compared with blood from normal individuals. The biochemical mutants thus may indicate some new biochemical abnormalities in the blood of patients with connective tissue diseases. The specificity and meaning of some of these new biochemical endpoints are currently under investigation.

DIVISION OF DERMATOLOGY

GORDON CARON, M.D., WALTER LOBITZ, JR., M.D. and RICHARD DOBSON, M.D.

The mechanisms of skin cancer.

Support: NIH

In order to determine the relationship of dermis and epidermis during carcinogenesis, rats were painted twice weekly with 2-anthramine. Specimens of skin were obtained serially for 36 weeks and stained with a variety of histochemical technics.

The earliest changes occur in the dermis and consist of an increase in acid mucopolysaccharide (AMP) and loss of staining of collagen. Only after dermal changes are well advanced does epidermal prolifertion begin. The degree of epidermal growth appears to depend on connective tissue changes. As growth of the basal cell epitheliomas proceeds, changes are induced in the altered connective tissue so that eventually structures resembling epidermal appendages are produced. Studies are now in progress which will attempt to elucidate the nature of the chemical changes in the connective tissue which may be of paramount importance in the genesis of skin cancer.

DIVISION OF EXPERIMENTAL MEDICINE

EDWIN OSGOOD, M.D., ROBERT KOLER, M.D., BERNARD PIROFSKY, M.D., ROBERT BIGLEY, M.D., DEMETRIOS RIGAS, PH.D., RICHARD JONES, M.D., PH.D. and JOHN BROOKE, B.S.

Fundamental nature of growth, cancer and gene action.

Support: NIH, Atomic Energy Commission, Medical Research Foundation of Oregon.

The following research is currently underway in the division of experimental medicine: Comparative clinical studies of treatments for leukemias and lymphomas. Immunohematological, biochemical and biophysical studies of proteins of blood plasma and cells. Enzymological studies of gene-produced defects. Biochemical and biophysical studies of the mitogenic action of phytohemagglutinins. Tissue culture studies of human blood cells. Microscopic and electron microscopic studies of chromosome number and morphology. Resume of results recorded: Approximate doubling of survival times of certain leukemias. Results on lymphomas are not yet available. A new concept of the fundamental nature of cell division, cancer, and aging. Bromelin test for transfusion compatibility and much new information on antigen-antibody reactions. Detailed information on the structure of hemoglobin H and other abnormal hemoglobins. New information on the mitogenic fraction of phytohemagglutinins. New information on the heredity and distribution of pyruvate kinase deficiency anemia. Long term cultures of nearly all varieties of blood cells. Unraveling and detailed electron micrographic structure of human hemic metaphase chromatids. Linear growth charts for all ages from 12 weeks premature through adult life, which will provide a dated medical history with effects of each illness, operation, and injury on height, weight or any other measurable variable and are ideal for weight control.

DIVISION OF DIABETES AND METABOLISM

RICHARD BAILEY, M.D.

The secretion and metabolism of aldosterone and other corticosteroids in human disease.

Support: USPHS, Oregon Heart Association.

The secretion and metabolism of aldosterone is being assessed in selected patients with alterations of water and electrolyte metabolism, and acid-base balance. The clinical conditions of particular interest include edema, primary aldosteronism, and diseases associated with hypertension and increased secretion of aldosterone. A variety of techniques are employed including radioisotopic analysis, partition and absorption chromatography, spectroscopy, and fluorimetry. Laboratory procedures employed in metabolic balance work have been established on a research basis in the metabolism laboratory. These procedures allow precise measurement of water and electrolyte balance in hospitalized patients, and are employed in conjunction with the studies of aldosterone secretion, excretion, and metabolism.

The investigative techniques are currently being extended to the measurement of secretion and metabolism of other corticosteroids including cortisol and corticosterone, and to the study of corticosteroid production by tumorous and nontumorous adrenal tissue using incubation techniques.

Several patients from the Pacific Northwest have been evaluated. Two patients with primary aldosteronism due to adrenocortical adenomata, and one patient with increased aldosterone production related to renal infarction have had surgical correction of their diseases. A variety of screening tests of possible aid in the diagnosis of primary and secondary aldosteronism are being evaluated on patients with similar alterations in water and electrolyte balance. Studies of the turnover and plasma disappearance rates, and estimation of the actual blood level of aldosterone are planned for the near future. These procedures will be of aid in elucidating alterations in metabolism of this hormone in disease states.

DIVISION OF NEUROLOGY

ROY L. SWANK, M.D., PH.D., J. H. FELLMAN, PH.D., and WOLFGANG HISSEN, M.D.

Aggregation of blood cells by 5-hydroxytryptamine (serotonin).

Support: USPHS and Medical Research Foundation of Oregon.

Using the screen filtration pressure method which measures the pressures required to force blood through a micro-filter with multiple pores precisely 20 micra square one can detect presence and magnitude of aggregated material in blood samples. With this method we have been able to demonstrate that during acute hypotension marked aggregation of blood elements, and in particular platelets, occurs. Because of presence of serotonin in platelets and elsewhere in the body, the effect of this material on blood was studied.

Very small amounts of serotonin (0.0001 mg/ml) cause a very slight decrease in screen filtration pressure and suggest some decrease in aggregation of platelets. However, increased doses (0.0005 mg/ml) cause marked aggregation of all blood elements. When serotonin was injected into the carotid artery, marked aggregation and clumping with slowing of the circulation, was noted in capillaries of the conjunctiva. When a series of injections were made subsequent injections of trypan blue demonstrated increased permeability of the vascular system of the brain on the injected side. Also decreases in hematocrit from 10 to 26 per cent resulted suggesting that red blood cells were trapped in the peripheral vascular bed. The possible role of serotonin in hypotensive and other types of shocks are being investigated.

DIVISION OF GASTROENTEROLOGY AND DEPARTMENT OF SURGERY

JOHN BENSON, JR., M.D., STANLEY JACOB, M.D. and CLIFFORD MELNYK, M.D.

Support: NIH, Medical Research Foundation of Oregon.

The "physiologic" gasterectomy of gastric freezing has evoked interest and controversy. Freezing with tissue destruction is one of two possible methods to produce a sub-zero stomach. Depression of the freezing point without freezing (supercooling) is a second approach.

Studies in this laboratory have shown that kidneys from dogs can be removed, maintained seven to eight hours at temperatures as low as minus 6°C with chemical agents such as dimethyl sulfoxide, and the organ retransplanted with maintenance of function. These experiments have convinced the investigators that depression of the freezing point is a less destructive process than actual freezing; consequently, an attempt was made to reproduce this state in the stomach in the hope of achieving gastric secretory arrest without tissue destruction.

True supercooling of liquids is a very unstable phenomenon in which the liquid assumes a temperature of many degrees below its freezing point but remains liquid. The theoretic limit for the supercooling of water is minus 39°C. The term "supercooling" in this study is used to indicate a situation in which the freezing point of the tissue is depressed by chemical means so that the tissue remains soft many degrees below its actual freezing point.

Initially *in vitro* studies were carried out to ascertain the feasibility of "supercooling." Needle thermistors were embedded in full thickness slices of gastric wall which were then immersed in 15 per cent dimethyl sulfoxide for one hour. The dimethyl sulfoxide impregnated slices did not freeze until actual tissue temperatures dropped below minus 6°C (the freezing point of normal gastric wall was established at minus 2°C).

Radioactive dimethyl sulfoxide (S^{35}) was introduced by a gastric tube in a 15 per cent concentration with 800 cc of saline into the stomach of a dog. At the end of one hour, gastric biopsies taken for radio-autography demonstrated that labelled dimethyl sulfoxide was not only heavily concentrated in the mucosa but actually had extended into the muscular layers of the stomach.

A total of 75 dogs have been studied. Forty-five of these were freezing "controls" and in 30 animals 600 to 800 cc of 15 per cent dimethyl sulfoxide was introduced into the stomach for a one-hour period prior to the "freeze." In both groups the Swenko hypothermia unit was employed utilizing an inflow temperature ranging between minus 16 to minus 22° C, a flow rate of 1300 cc per minute, 600 to 800 cc balloon distention and a one-hour period for the process. In 10 of these animals actual gastric wall temperatures were monitored by four submucosal needle thermistors placed into the stomach prior to cooling. The following conclusions seem warranted:

1. "Freezing" of whole dog stomachs is not a reproducible procedure. It is not possible to predict extent of the freeze or in fact whether or not freezing will occur at all in a one-hour period in a larger dog (over 30 lbs.). The usual situation is a small area of freeze on the upper greater curvature. Outflow temperatures of the machine even after two and one half hours do not reflect the gastric wall temperature.

2. A supercooled stomach has definitely been produced in two animals. In one of these a submucosal thermistor recorded a temperature of minus 6°C in an area which by direct observation proved to be soft. In a second dog supercooled over a three-hour period, there was a full thickness freeze of the entire left side of the anterior abdominal wall but the stomach remained soft.

3. Histamine stimulation (0.1 mg. base/kg) in 20 dogs following standard gastric freezing or attempted supercooling of whole stomachs produced substantial volume in 75 per cent of these animals with free acids in the range of 80 to 120 units and achlorhydria in none. These dogs were studied at three days, one week, two weeks, and six weeks after the procedure with no significant alternation in free acid secretion.

Laboratory experience with "gastric freezing" of whole stomachs has convinced the investigators that this technique produces variable results. Not only do large dogs frequently fail to show freezing in a one-hour period, but no instance of actual gastric wall temperatures below minus 6°C was recorded during a two-hour period. In view of the variability of the procedure in dog stomachs, skepticism concerning the extent of "freezing" in humans seems warranted.

On the basis of having produced a supercooled stomach on two occasions out of 30 the investigators are encouraged to continue studies in an attempt to describe a reproducible method for supercooling which might be a valuable physiologic tool and of some clinical application in peptic disease.

DEPARTMENT OF SURGERY

Research in the Department of Surgery at the University of Oregon Medical School is directed towards several specific but fairly broad areas; namely, wound healing, tissue transplantation, organ preservation, arteriosclerosis, cancer and surgical shock. Each of these areas is under direction of a particular investigator.

WOUND HEALING

DAVID JACKSON, PH.D. and J. E. DUNPHY, M.D.

Support: NIH, AHA, Life Insurance Medical Research Fund, Helen Hay Whitney Foundation and individual private sources.

There are two distinct areas being investigated:

1. Under the direction of Dr. Jackson, the fundamental aspects of protein synthesis by the fibroblast are being delineated. Incorporation of labelled amino acids into collagen under a variety of circumstances permits a study of the subcellular components of the fibroblast. Such biochemical studies are frequently combined with electron microscopic observations.

2. Under Dr. Dunphy's direction and using techniques as they are provided by Dr. Jackson's laboratory, such features of wound healing as the relationship between the initial inflammatory response and the subsequent repair, the effect of hormones on wound healing and factors contributing to wound contraction are being studied.

TISSUE TRANSPLANTATION AND ORGAN PRESERVATION

STANLEY JACOB, M.D.

Support: NIH, ACS and the Burroughs Wellcome Company.

Over a period of several years, extensive studies of parathyroid and kidney transplantation have been made by Dr. Jacob. Considerable attention has been directed to means of preserving the whole kidney outside of the body for periods of time before transplantation. This work is directed towards the ultimate establishment of organ banks. It is now possible in the experimental laboratory to keep a kidney outside the body for a matter of several hours to as long as a day or two and have it function after transplantation. The effectiveness of function and long-term duration of function are matters still under study.

A correlary of this has been an appraisal of the effects of hypothermia and freezing on gastric function. This is being carried out in conjunction with the division of gastroenterology.

ARTERIOSCLEROSIS AND VASCULAR GRAFTS

WILLIAM KRIPPAEHNE, M.D., DAVID JACKSON, PH.D. and J. E. DUNPHY, M.D.

Support: AHA and NIH

A logical application of much of the basic information developed in Dr. Jackson's laboratory has led to a study of collagen synthesis in relation to arterial wounds and vascular grafts. Considerable work is being done on the biochemistry of the aortic wall. Dr. Edward Cleary, an Australian physician, is carrying out fundamental observations in this area in conjunction with Dr. Jackson. An ingenious method of constructing a collagen tube from the submucosa of the intestinal tract and implanting it in various sites in the body has thrown new light on the behavior of transplanted connective tissue under both autologous conditions.

CANCER

WILLIAM FLETCHER, M.D.

Support: ACS and NIH and Oregon Cancer Society.

A long-term study of the effect of preoperative irradiation in cancer of the rectum is in progress. It has been shown that many cancers of the rectum are remarkably sensitive to irradiation. This work has been carried out in conjunction with the department of radiology. Several apparently inoperable cancers have responded so well to irradiation that subsequently surgery has been possible.

A number of experimental studies of the effect of endotoxins and various chemotherapeutic agents on experimental and human cancers are being carried out by Dr. Fletcher.

SURGICAL SHOCK

CLARE PETERSON, M.D., FREDERICK HAUGEN, M.D. and R. MARK VETTO, M.D.

Support: NIH and the Veterans Administration Research Fund.

Dr. Peterson together with Dr. Haugen is exploring nervous factors in hemorrhagic and other forms of shock. It has been shown that under a variety of circumstances loss of particular reflexes are a more definitive indication of irreversible shock than the level of hypotension. Support has been largely from the NIH.

The role of liver in shock has been studied by Dr. Vetto at the Veterans Administration Hospital with particular reference to endotoxic and staphylococcal endotoxins.

DIVISION OF ORTHOPEDICS

WILLIAM SNELL, M.D.

Biomechanics of lumbar spine.

Support: Medical Research Foundation of Oregon.

Cine fluroscopy of the lumbar spine is being performed to determine biomechanics of this region in normal adults. If this can be established, deviations from normal may be related to clinical syndromes involving this region.

Not enough procedures have been completed to report results. However, preliminary studies suggest distinct patterns of lumbar motion.

DIVISION OF UROLOGY

CLARENCE HODGES, M.D.

Localization of radioactive phosphorus in the prostate gland.

Support: Atomic Energy Commission and USPHS.

Regional perfusion of the isolated prostatic circulation in dogs, using an extracorporeal pump-oxygenator system, has been employed with blood containing various radioactive phosphates. This method has also been used for treatment of patients with inoperable cancers confined to the periprostatic area.

Regional perfusion of the prostatic circulation in experimental animals and in human patients has demonstrated a high uptake of radioactive phosphorus. In patients, irritative symptoms due to prostatic cancer have subsided and the tumor has shown objective remission, characterized by softening and shrinkage. Escape of radioactive material into the peripheral circulation has resulted in severe, temporary hematopoietic depression. The duration of remission of subjective and objective parameters has not been determined.

DIVISION OF ANESTHESIOLOGY

DAVID GOWING, M.D., FREDERICK HAUGEN, M.D., and REX UNDERWOOD, M.D.

Studies of electronarcosis in dogs.

Support: USPHS and Medical Research Foundation of Oregon.

In the method which is currently being used, a negative electrode is placed on the vertex of the animal's skull, and the positive one against the roof of the mouth. Direct current in an average dosage of 5 milliamperes is applied, to which is slowly added alternating current in the same dosage. The a.c. is actually a two-millisecond, 100-cycle square wave whose baseline is raised by the d.c. so that it is always above zero volts. A sleep-like state with insensitivity to pain is produced, but the mechanism involved is not understood. Abnormalties of blood pressure and ECG are absent. Behavioral changes are not apparant after electronarcosis. Another group investigating electronarcosis with much higher power levels have done histologic brain sections and have not found any evidence of brain damage. When the current is turned off, the dog awakens fully within ten seconds. It is hoped that this technique may be applicable to clinical pain problems, but its safety has not yet been adequately evaluated.

DEPARTMENT OF OTOLARYNGOLOGY

D. D. DEWEESE, M.D. and KERMIT RAGAIN, B.A.

Support: USPHS.

A statistical survey is being made of hearing results and post-operative complications following surgery for mastoiditis, otosclerosis, ear drum repair and facial nerve repair. The survey, which will include over 1,500 cases from 1944 to 1963, has not been in progress long enough to report any results.

COLLABORATIVE PERINATAL RESEARCH PROJECT

Departments of Pediatrics, Obstetrics and Gynecology and Crippled Children's Division.

RALPH BENSON, M.D., RICHARD OLMSTED, M.D. and RICHARD SLEETER, M.D.

Support: NINDB.

The University of Oregon Medical School is one of 15 co-operating institutions in the collaborative project sponsored by the National Institute of Neurological Diseases and Blindness for the study of the causes of cerebral palsy, mental retardation, blindness, deafness and kindred disorders of infancy and childhood.

Pregnancies are studied as soon after conception as possible, through the prenatal, natal and postnatal period. A thorough study is made of placentas and infants.

At varying intervals the off-spring are given neurological, pediatric, psychological, speech and audiometeric examinations.

A correlation will be made, if possible, of any neurological aberrations or congenital malformations with the mothers' data to determine if there are any possible etiologies.

The study is just beginning to produce statistics hence it is too early to report any results.

DEPARTMENT OF PEDIATRICS

RUDOLF ENGEL, M.D.

Appraisal of the newborn by electroencephalography.

Support: NIH.

The electroencephalogram of the newborn is easy to obtain and can render valuable information regarding abnormal function as well as concerning neuronal maturation. One of the very important factors influencing mental development is the gestational age at birth.

The state of maturation in premature infants can be evaluated by electroencephalographic techniques. The electroencephalographic age is characterized by specific patterns for each period of 5, 6, 7 and 8 months of conceptual age. The electrical criteria of maturation permit the discrimination between a five-month non-viable fetus and a six-month viable premature (Dreyfus-Brisac).

In addition to the waking and sleeping records, measurements of photically evoked responses present a valuable tool for the estimation of the maturational state at birth. The measurements are taken from the electroencephalographic tracing at the beginning of the photic signal to the onset of the response reaction over the occipital areas. Infants with a conceptual age of 40 weeks have mean latency response to photic stimulation of 153 ± 27 msec. Premature babies of a conceptual age between 29 and 33 weeks have a latency period of over 200 msec. Postmature babies have latency periods of 100 msec. and sometimes lower.

Marked individual differences are present, but the over-all picture shows a progressive shortening of response latency of almost linear relationship.

It will be of great interest in the follow-up of these children to see whether term infants with short latency periods perform differently from "slow reactors" at birth, when they reach school age. The standard eight-month psychological examination of the Collaborative Study on Cerebral Palsy, Mental Retardation, and Other Neurological and Sensory Disorders of Infancy and Childhood presented the opportunity to correlate the findings on mental performance and fine and gross motor tests at that age with the electroencephalographic findings at birth in 159 mostly full-term infants. The test was carried out by Drs. Kangas and Butler in the departments of pediatrics and medical psychology at the University of Oregon Medical School. The test for the mental score consisted of a modified version of Nancy Bayley's infant scale and was made up of items similar to those found on the Gesell and Cattell scales. Surprisingly, the infants with short latency on photic stimulation at birth, had a significantly higher mental score at the eight-month testing than the rest of the children with average or long latencies in the newborn period.

The application of electroencephalography in the nursery is a simple and completely harmless procedure.

DEPARTMENT OF PSYCHIATRY

RUTH MATARAZZO, PH.D., JEANNE PHILLIPS, PH.D., GEORGE SASLOW, M.D. and LENA KENIN, M.D.

The process of acquiring skill in interviewing.

Support: Medical Research Foundation of Oregon and NIH.

This study is an investigation of the number and kind of interviewing errors made by novice psychotherapists (sophomore medical students), and their pattern of change over a 12-week period.

One month prior to the beginning of a summer clerkship, five students interviewed for one-half hour the same two "old" (or experienced) psychiatric patients. The same students interviewed the same two patients again at the start of their clerkship; again after four-weeks of intensive experience and supervision in psychotherapy; and again after four additional weeks of similar experience and instruction. The students were observed through a one-way screen and each utterance rated, by a psychologist, as to its general quality: Good, Fair or Poor. In addition, if the quality rating was either Fair or Poor, the rater made a second judgment as to the specific type of error(s) embodied in the statement, using a pre-selected list of 30 potential errors. They seemed to fall into three broad types including: I Errors of Focus; II Faulty Role Definition—authoritarian or social; III Faulty Facilitation of Communication. Reliability of the ratings, between two psychology staff members, ranged from 84 per cent to 96 per cent agreement.

Between Test Interview Series I and II (four weeks with no intervening interview experience or supervision) there was slight improvement in the students' interview technique, apparently on the basis of lessened anxiety and having thought about the difficulties encountered in their first interviews (they had been given no feedback). Between Test Interview Series II and III (during which they had their first month of intensive instruction and experience) there was marked improvement: "Good" statements increased from 24 per cent in Series II to 40 per cent in Series III; "Fair" statements decreased from 57 per cent to 49 per cent and "Poor" statements from 19 per cent to 11 per cent. The greatest improvement in interview method occurred during this first month of instruction, although it continued at a somewhat slower rate during the second month.

In regard to specific kind of error, the greatest source of initial error was in Facilitation of Communication (e.g., yes-no type questions, interruptions, etc.), and it was also the area of greatest improvement (65 per cent to 31 per cent between Series I and IV). Thus the student appears, initially, to stand in his own way, but can learn fairly quickly to allow the patient to tell his story. Errors of Focus were a less frequent type of error but showed almost equally dramatic improvement (43 per cent to 18 per cent of utterances). Role Definition, while a smaller source of error, appeared to show no improvement during this interval, being 13 per cent in Series II and 12 per cent in Series III (i.e., the occasional student who tended to be dogmatic or who established a social rather than professional relationship had difficulty in altering this).

These general results have been cross-validated over three summers with three sets of students although this is a specific report of one group. The students have, however, shown steady improvement in post-instructional performance over the years as we have altered instructional procedure. These changes involved (1) increased use of direct observation by the supervisor and fellow students and (2) increased use of group discussion with the students discussing each others' interview technique. The latter enabled them to (a) analyze the interview technique of others at the same experience level and (b) obtain feedback from peers as well as from an instructor.

DEPARTMENT OF PHARMACOLOGY

C. K. CHAPMAN, B.S., C.M. DEMING, B.S., J. ECHEVARRIA, D.D.S., and N. A. DAVID, M.D.

A new multidimensional measurement apparatus for recording effects of CNS stimulant or depressant drugs in rats.

Support: Wyeth Foundation Grant.

The apparatus used in this investigation combines in one unit: (a) a "jiggle" cage, size 14x18x22 inches, mounted on springs and counterbalanced for weight and contained within the cage, (b) an activity wheel to which the rat has access at all times, (c) three sets of photo-electric cells placed along the sides to record movement over the cage floor and (d) a strain gauge attached to a four-inch projection at one end to monitor horizontal movements. Data were recorded using a remotely located four channel Grass Polygraph amplifier. After drug injection the animal's activity is monitored for one hour.

Using this method to study the effects of chlorpromazine, pentobarbital, chlordiazepoxide, hydroxyzine, amphetamine, etc., it has been found that multiple simultaneous measurements of activity after drug administration provide more information in a shorter time, allow intercorrelations between respective measurements and identify unexpected behavioral changes which would not be registered by single measurements. Each drug shows a distinct and different pattern for the activity "curve," which is reproducible in other animals, when this multidimensional method is employed.

DEPARTMENT OF PATHOLOGY

BENJAMIN SIEGEL, PH.D.

Infectivity and antigenicity of viral DNA.

Support: NIH.

Highly purified preparations of canary pox virus have been obtained by fluorocarbon homogenization of confluently infected chick chorioallantoic membranes followed by centrifugation in a sucrose density gradient. Dispersion by sonication and deproteinization by sodium dodecyl sulfate and isopropanol precipitation yield a pure preparation of DNA. The uncoiling of the double stranded DNA is carried out by heating and rapid cooling. Antibody to intact virus has been prepared by immunizing chickens.

Chick embryo fibroblast cultures inoculated with the "naked" DNA evince a cytopathogenicity similar to that produced by the intact virus, indicating that the DNA of this pox virus is by itself infectious. Typical pocks are likewise produced on the chick chorioallantoic membrane. Infectivity studies with uncoiled pox viral DNA are in progress, to determine the ability of single strands to act as templates for transcription or as sources of genetic messages in the cell. In order to ascertain whether any portion of antibody is directed against antigenic determinants of the nucleic acid, antibody to the virus is being studied for inhibition of both the double helical and single-stranded viral DNA.

DEPARTMENT OF PHYSIOLOGY

ALFRED RAMPONE, PH.D.

Support: USPHS.

Rats were used to measure the internal body temperature changes which are brought about as a result of food consumption. One of theories put forth to explain the mechanism of food intake regulation, states that the amount of food which an animal consumes is governed by the extra heat which is liberated as a waste product of nutrient assimilation—the so called specific dynamic action of food. This extra heat is said to provide the signal to thermosensitive elements in the hypothalamus which respond in such a way as to produce the complex pattern of physiological changes known as satiety. A direct test of this theory was made by obtaining a continuous record of brain and rectal temperatures during a period of fasting followed by a period of ad libitum feeding. Rats were trained to consume all of their daily rations in one hour following which calibrated "bead" thermistors were surgically implanted in the cranium. These thermistors have extremely fast response times and can record temperature changes in the order of 0.01°C. Following recovery from surgery, a second thermistor was inserted into the rectum and temperatures were monitored from the two sites simultaneously for one hour of pre-feeding, one hour of feeding and one hour of post-feeding. Diets were varied in composition and the food consumption was measured both in terms of bulk and calories. The extra heat expected from specific dynamic action was estimated for each diet.

In all cases, a dramatic and almost instantaneous rise in tracranial temperature was recorded when the animals were offered food, reaching a peak in several minutes and remaining elevated during the entire feeding and post-feeding periods. At the same time, the rectal temperature fell in near mirror image fashion. These responses occurred with all diets tested and neither the magnitude nor the duration of the responses correlated with the type of food or the amount of food consumed. They occurred with both nutritive and non-nutritive diets (cellulose flavored with saccharine) and in some cases with the food pans covered with a sheet of glass. The results fail to support the thermostatic theory of food intake regulation, but provide evidence for the existence of rapid vasomotor responses occurring as the result of feeding or in anticipation of feeding. The quickness of the responses suggests that the mechanism is reflex in nature. The opposite responses seen in the rectum and cranium suggest that the reflex brings about a shunting of blood from one region of the body to another. Perhaps certain subjective sensations related to food consumption (warmth, sweating) can be attributed to this phenomenon, but it seems unrelated to the basic process of food intake regulation.

DEPARTMENT OF ANATOMY

RICHARD LYONS, M.D., ERNEST HAGE and GERALD ERICKSON, B.A.

Support: Oregon Heart Association and NSF.

Whales will be obtained through Bioproducts Inc. of Warrenton, Oregon. The 200-300 pound hearts will be removed *in toto* and treated in the following manner:

Blood is removed from the chambers and the coronary arteries. Heart is floated in water and a foamable type of plastic is inserted into the floor of each ventrical. As the plastic expands, the ventricles and atria are filled and excessive pressure is vented through a special tube. After providing this support, the coronary arteries are next injected with a polimerizing type of colored resin. Upon polymerization of the plastics, the heart is lowered into a 40 per cent solution of sodium hydroxide. About one to two weeks will be required for digestion of the cardiac tissue and exposure of the plastic casting.

Preliminary studies have been performed on the ten-pound horse heart and techniques are now nearly perfected for use on whale hearts. Attractive, accurate plastic models are, therefore, obtained to provide study material for evaluating the comparative anatomy of the coronary circulation.

DEPARTMENT OF BIOCHEMISTRY

JOHN VAN BRUGGEN, PH.D.

Support: Atomic Energy Commission.

The movement of both ionic and non-ionic materials through membranes is a complex process. Some material moves by simple diffusion but other material moves by mechanisms called "active transport." Active transport requires a living cell, is generally dependent upon aerobic conditions, uses some form of cellular energy and is generally quite specific for certain ions or molecules. Active transport is responsible for the maintenance of concentration differences across living membranes, i.e., red blood cell Na+ is 18 meq/1, but plasma Na is 150 meq/1. The movement of sodium from the red cell to the plasma against a concentration gradient is controlled by "the sodium pump." The nature of and the mechanism of action of "the sodium pump" are unknown, the term "pump" then is used in a descriptive fashion.

The abdominal skin of the frog serves as a model membrane system for it has a sodium pump that serves to move Na+ from the outside surface of the skin to the inside surface. This selective movement of a + ion causes the inner face of the skin to have a + potential of up to 100 mv. The selective net movement of Na+ in the inward direction can be quantitated by use of a short-circuit device which measures the current flowing in an outside circuit, as an outside potential is used to negate the potential normally present on the skin.

The present studies seek to determine the metabolic energy sources of the frog skin that are related to active transport. The studies also seek to furnish information on the nature of "the pump." The third aspect of the studies is to determine the effect of radiation on the active transport reactions.

A manuscript just being completed describes how our studies have shown that the inner facing tissue of the frog skin, the basal cell layer or Tela, is associated with transport. A current theory holds that the cholinesterase of the Tela is involved in the pumping mechanism. Our studies show that the basal cell layer acts as a semi-selective barrier to many ions but that it does not contain the active pumping mechanism.

DEPARTMENT OF MEDICAL PSYCHOLOGY

RICHARD THOMPSON, PH.D., DAVID PHILLIPS, PH.D., RICHARD JOHNSON, M.D., WILLIAM PRESCOTT, M.D., ROBERT KRAMER, M.D., JON SHAW, B.A., HILTON SMITH, B.S. and ROBERT CONNERS, M.A.

Studies of association areas of cerebral cortex.

Support: NIH and NSF.

The purpose of the studies described here is to further understanding of the organization and functions of "association" or silent areas of the cerebral cortex. These regions of the brain have expanded markedly in the course of evolution, reaching their maximum development in man. Using cats and a series of primates ranging from squirrel monkey to Rhesus monkey, we are studying the nature of sensory input, electrical activity, and role in learning and other aspects of behavior of these association areas. Equipment and methods utilized include EEG recording, oscilloscope recordings of evoked activity to auditory, visual and tactile stimuli, and long term conditioning and training experiments measuring the effects of removal of these areas.

Our results to date have demonstrated that all stimulus modalities project to association areas of the cortex in a diffuse and undifferentiated manner. There are several sharply localized regions or foci of projection, but for each focus the distribution and characteristics of evoked responses to auditory, visual and tactile stimuli are identical in all respects. Further, these foci represent regions of maximum spontaneous EEG activity. Recent findings suggest that these cortical association foci are specialized regions for cortical projections of the ascending reticular formation and diffuse thalamic system. Our lesion-behavior studies on the possible functions of these regions of cortex are consistent with the electrophysiological studies and suggest a special role in aspects of behavior usually subsumed under the general category of "attention" or alerting. Animals with these areas removed are unable to respond appropriately to patterns of external stimulation, although they are not impaired in simple learning tasks.

How many make a bowl of soup, Doctor?

Naturally, the number of beans, peas or lentils that go into a bowl of Campbell's soup will depend on the variety of soup and on what our experience and our chefs tell us should be in the soup. But you can be sure of one thing: every bowl of Campbell's soup made with the legumes you see in our picture, will be nutritious and of course delicious.

We think you'd enjoy Campbell's Bean with Bacon Soup, Green Pea, Black Bean, Minestrone, or Vegetable Bean Soup. Certainly, your patients would, too . . . and if you can get a patient to enjoy the food he needs to eat, he'll be more likely to stick to the diet you prescribe.

But when you plan diets for patients, don't take time to count the beans. Instead, you can count the calories or grams of protein in these soups. You'll see at once that several of our soups would be very desirable to use if you have a patient who needs to put on weight. Bean with Bacon Soup, for instance, contains about 133 calories and 6.8 grams of protein in a 7 oz. serving; and Chili Beef Soup, about 131 calories and 6.2 grams of protein.

At the other end of the scale, many of Campbell's Soups are good to use if you want to give a patient something satisfying but with fewer calories. Vegetable Bean has about 82 calories and 4.4 grams of protein; Minestrone only 83 calories and about 4.9 grams of protein per 7 oz. serving.

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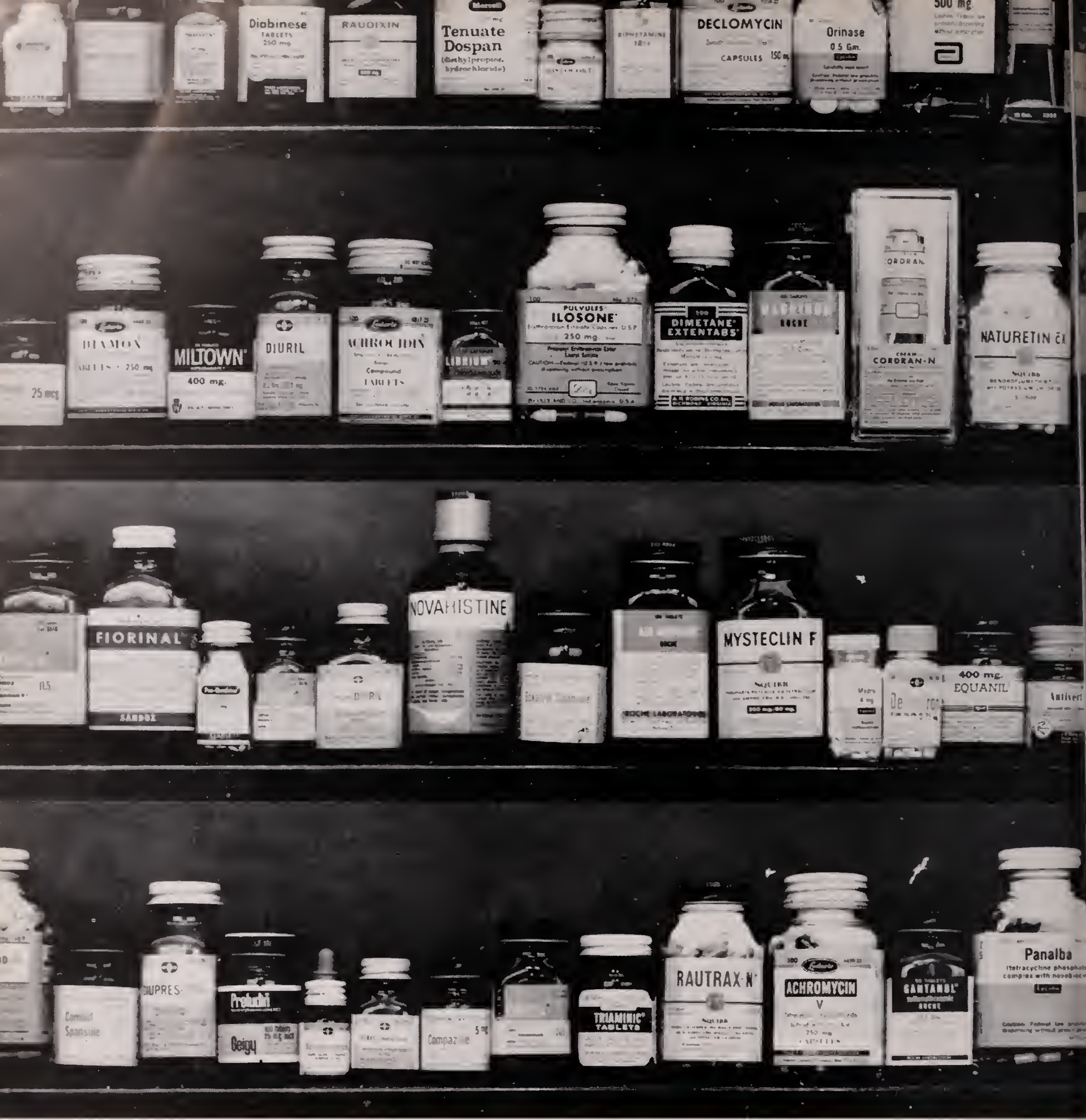

we couldn't begin to get them all into the picture...

Much has been said and more has been written about the quality of, and the motives behind, independent drug research in this country. So we decided to take a look at what we, as an industry, have done in terms of medical progress over the years.

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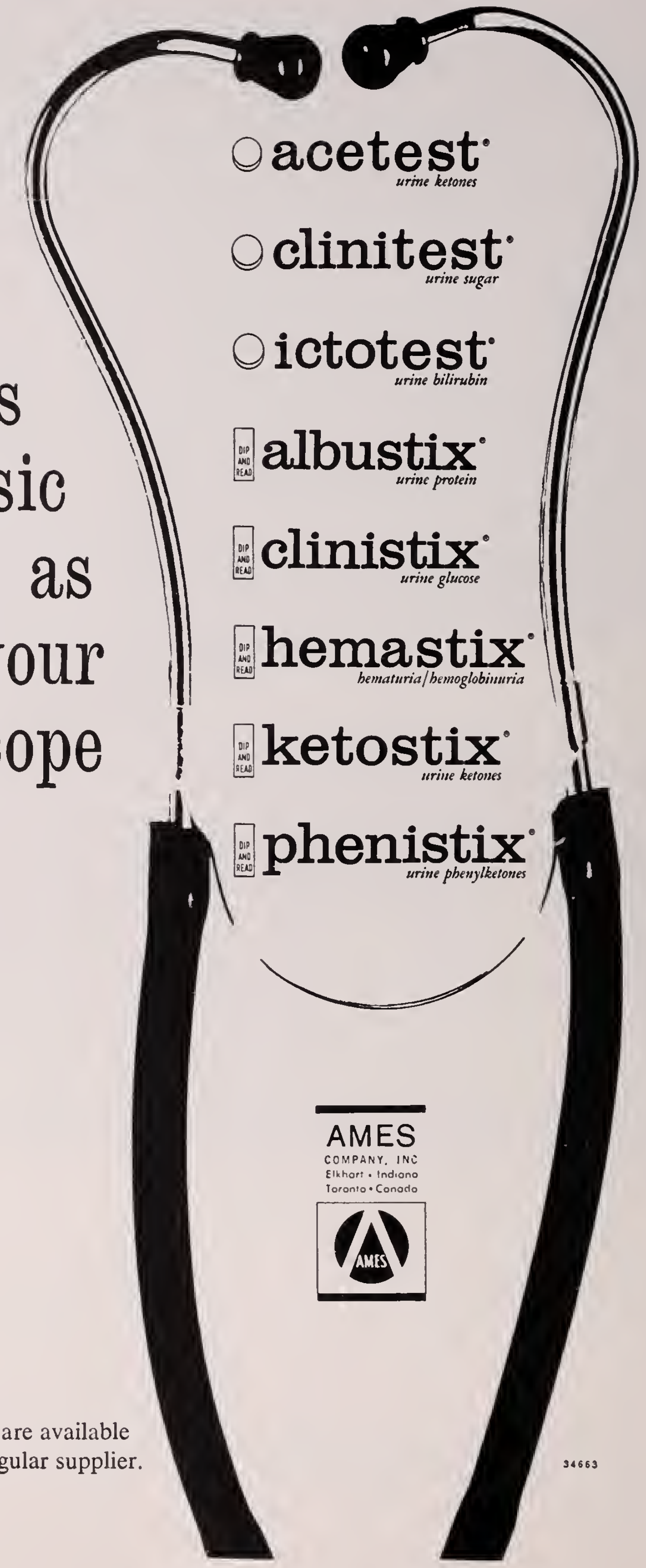
References: 1. Baker, A. G.: Penn. Med. J. *63*:697 (May) 1960. 2. Smith, R. T.: New York Med. (Aug. 20) 1952, pp. 16-19. 3. Smith, R. T.: Med. Clin. N. Amer. (Mar.) 1957. 4. Lehrer, H. W.; Lehrer, H. G., and Lehrer, D. R.: Northw. Med. (Nov.) 1955. 5. Sforzolini, G. S.: Arch. Ophthal. *62*:381 (Sept.) 1959. 6. Gile, J. H.: W. Virginia Med. J. *59*:120-122 (May) 1963.

urine
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- Delinquency
- Mortality and Morbidity Due to Smoking
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- The Adolescent Athlete

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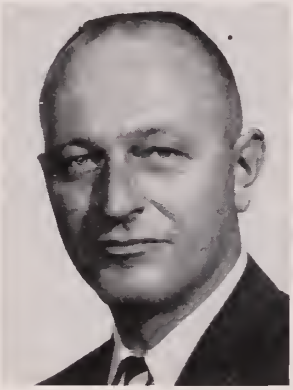
Otto C. Page, M.D.
General Chairman

For the third time in 58 years, Portland welcomes a meeting of the world's greatest medical association. Meetings of the American Medical Association in Portland, 1905 and 1929, were annual sessions. The meeting to be held December 1-4, 1963, is a Clinical Meeting, designed as a superb post graduate session for physicians in every field of practice. Lectures, panels, symposia, breakfast round-tables, motion pictures, color television and exhibits will bring to this meeting the latest of research and the best in the modern practice of medicine. More than 100 physicians from all parts of the country, and several from abroad, will deliver lectures and participate in panel discussions. The Scientific Exhibit alone will repay any knowledge-hungry physician for his trip to Portland to attend the session. Meetings of the House of Delegates will be in the Portland Hilton Hotel, the headquarters hotel for the session. Officers, delegates and staff personnel will be at the Hilton most of the time throughout the session. Visitors will be welcome at House sessions and any member of AMA has the privilege of participating in discussion of matters being considered by reference committees of the House. Breakfast roundtable meetings will be at the Multnomah, Benson, and Sheraton Hotels. Scientific and technical exhibits and program, other than the breakfast meetings, will be in Portland's new Memorial Coliseum.

If you have not yet registered with AMA or requested room reservations from the Portland Convention Bureau, please do so now. Forms will be found on another page in this section. We want you to attend this meeting. You will enjoy it.

Sincerely,

Otto C. Page, M.D.
General Chairman

EDWARD ANNIS, M.D.
President
American Medical Association

NORMAN A. WELCH, M.D.
President-Elect
American Medical Association

HEADQUARTERS EXECUTIVE STAFF

Moves to Portland

F. J. L. BLASINGAME, M.D.
Executive Vice President

ERNEST B. HOWARD, M.D.
Assistant Executive Vice President

AMA headquarters staff will be well represented at Portland and there will be opportunity to get acquainted with many of those who work in the ten story building at 535 North Dearborn Street, Chicago. More than 750 are employed there and the Washington, D.C. staff numbers 20. Many executive positions are filled by physicians and most of them have been in practice.

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Director, Scientific Publications Division

HUGH H. HUSSEY, M.D.
Director, Scientific Activities Division

R. L. WHITE, M.D.
Director, Division of Environmental Medicine and Medical Services

AUBREY GATES
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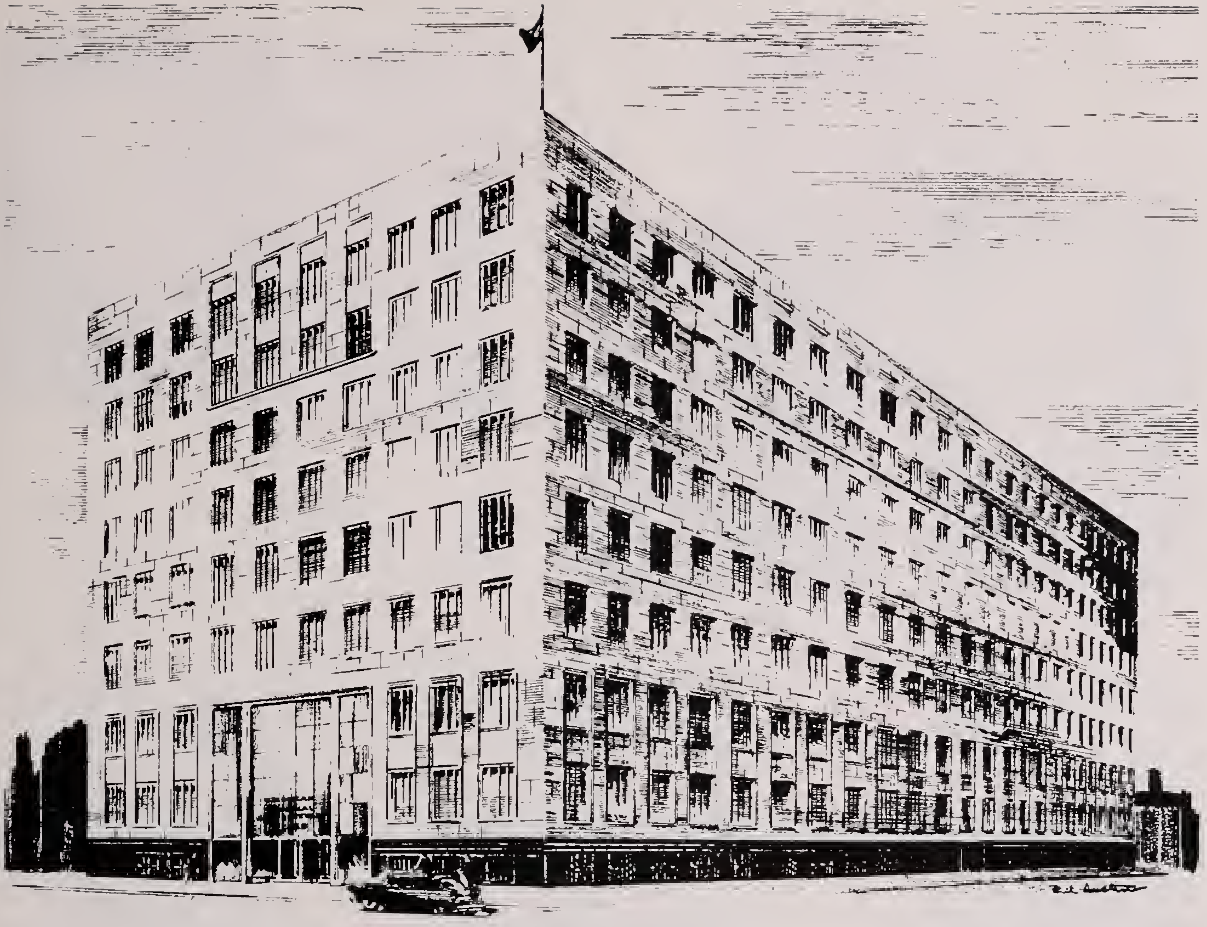
JIM REED
Director, Communications Division



AMA headquarters building at 535 North Dearborn Street, Chicago. The building, long owned by AMA, and valued at well over a million dollars, was completely modernized recently.

Administrative head at Chicago is F. J. L. Blasingame, M.D., Executive Vice-President. Working closely with him is the Assistant Executive Vice-President, Ernest B. Howard, M.D., who practiced in the United States and in South America before joining the AMA staff.

There are eight administrative divisions, each headed by a director selected for special knowledge and experience as well as for executive ability.

RUSSELL H. CLARK
Director, Business Division

R. B. THROCKMORTON, L.L.B.
General Counsel

ROY T. LESTER, M.D.
Manager, Washington, D.C. Office

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Vice President

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MILFORD O. ROUSE, M.D.
Speaker, House of Delegates

W. C. BORNEMEIER, M.D.
Vice Speaker, House of Delegates

Business of the House of Delegates is conducted with strict attention to parliamentary rules. The Portland meeting will be the first for the team of Rouse and Bornemeier. Dr. Rouse, formerly Vice-Speaker, was elected to the speakership when Norman Welch was named President-Elect. Dr. Bornemeier has long been a popular and able member of the House.

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Responsibility for every phase of AMA activity rests on the Board of Trustees. It is a heavy burden. Board members sacrifice much time and energy in fulfilling their duties and average at least a fourth of their time away from home. They meet regularly in Chicago and hold innumerable special meetings, called on a moment's notice, during any session of the House. The Board does not establish policy but carries out directives and policies of the House of Delegates. Meetings of the Board are not open to members of the Association but reports of its actions are readily available.

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Scenes such as those at the left will greet registrants at the Portland meeting. Exhibits, both scientific and industrial, offer information in many fields. It is no small task to plan for such a meeting. Photographs below are of heads of important committees. They have been working for a year or more in preparing what is expected to be the best medical meeting ever held in the Northwest.

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PROGRAM

Huldrick Kammer, M.D.
Chairman,
Program Committee

Program for the AMA Clinical Meeting in Portland will bring to the Northwest the newest of the new and the most recent information on the old. Knowledge of genes and chromosomes is important in today's practice of medicine but so is a modern concept of shortness of breath. The program will include these and a host of other subjects. It has been planned to assist physicians in all fields to keep abreast of current progress. We believe it is the finest postgraduate session ever presented in this area and we hope every physician who can possibly do so will plan to attend.

It would be an understatement of some proportion to say that the past year has been a busy one for the many committee and subcommittee members who have been so generous with time, interest, and ideas. Just a year ago we began planning for this meeting and held the first meeting of the program committee. Everyone agreed that the program must cover all fields of medicine, that it must bring to the Northwest the very latest information of importance to the practice of medicine and that the subjects chosen must be presented by the best informed and most able speakers in each field.

After this was decided, we discussed subjects and devoted several meetings to selection of the type of material.

The subjects chosen represent a consensus of the main committee after many sessions and a great deal of pertinent discussion. At about the time these discussions

Portland Memorial Coliseum

were going on, we held subcommittee meetings with representatives from the various specialties. These meetings added information on the importance of particular subjects but were most helpful in providing lists of top individuals in each field. It was from these lists that we began inviting the more than 100 physicians and research scientists who will present the program.

With the exception of breakfast sessions in downtown hotels, the entire program will be presented at Portland's new Memorial Coliseum where there is ample exhibit space as well as numerous lecture rooms, all equipped with excellent projection and voice amplification equipment.

There will be two general sessions, 11:30 to 12:30 Tuesday and Wednesday, December 3, and 4. No other lectures have been scheduled for these times. On Tuesday, Rupert E. Billingham, Ph.D. of the Wistar Institute, Philadelphia, will discuss developments in the field of tissue immunity and the problems involved in transplantation. His recognition in this field is worldwide.

At the general session on Wednesday, Professor C. H. Stuart-Harris, Director of the Department of Medicine, University of Sheffield, England, will deliver a lecture on shortness of breath. His studies have been in the fields of chronic, nonspecific pulmonary disease, and infections, both bacillary and viral.

Breakfast sessions will be informal, panel type discussions devoted to topics in special fields. These will start at 7:00 a.m., at the Multnomah, Benson and Sheraton hotels, on Monday and Tuesday only.

Other than at the time of the general sessions, there will be three simultaneous programs at the Coliseum. In developing this part of the meeting, the committee gave particular attention to the symposia and to selection of moderators.

J. Engelbert Dunphy, of the University of Oregon Medical School, well known for his skill in producing lively panel discussions, will be moderator for a team highly qualified in the field of surgical aspects of infection. Members of Dr. Dunphy's panel will be W. M. M. Kirby of Seattle, Jacob Fine of Boston and Edwin J. Pulaski, of Washington, D.C.

Another exceptional panel will include Levin Grumbach of New York, Arno Motulsky of Seattle, Carl Pearson of Los Angeles and Robert Blizzard of Baltimore, all of whom are currently making significant contributions to the rapidly growing fields of genetics and immunology. The discussion will be moderated by Robert Koler of Portland.

The subject of breast cancer treatment will bring to the meeting the experience of Ian Macdonald and Richard Martin of the M. D. Anderson Hospital in Houston. They will be joined by Maurice Lenz, emeritus professor of radiology, Columbian Presbyterian Hospital, New York.

One of the sections will devote an entire day to kidney problems. This will include a very new concept of acid-base control and a symposium on intermittent dialysis. The dialysis symposium will be presented by a Bostonian and the Seattle team headed by Belding Scribner who has been the outstanding investigator in this field. With Dr. Scribner, from Seattle, will be S. T. Boen and John S. Murray. William B. Schwartz, Jr., will be the Boston member of the panel. One aspect of this discussion will be the economic problem raised when the method became available and reliable but so expensive that it could not be offered to all who might benefit from it.

Another day-long program, of very great interest to pediatricians and those dealing with juvenile delinquency, will be devoted to problems of adolescence. Speakers for this section will be, Frank Douglass, Seattle, president of the American College of Pediatrics, evaluation of the adolescent; Felix P. Heald, Washington, D.C., nutrition; Solomon Kaplan, Los Angeles, growth; Janet McArthur, Boston, gynecologic disorders; Adolph Crist, Seattle, social habits and delinquency; and Donald B. Slocum, Eugene, the adolescent athlete.

Miscellaneous topics for discussion include use of anticoagulants, peptic ulcer, metabolic obesity, anemia, edema, fever of unknown origin, smoking related to mortality and morbidity, heart and blood vessel surgery, causes of death in automobile accidents, and many others.

Educational rewards for those attending the meeting will not be confined to the lectures and symposia. Color television will bring wet and dry clinical material, otherwise not available for presentation, into the Coliseum and will permit two way communication between the audience and the surgeon during an operation or a panel discussing cases shown. Those who have not seen the type of color television provided by the Smith, Kline and French Laboratories will be amazed by the clarity of the large screen pictures and the ease of vocal communication between the Coliseum and the hospital from which the program is transmitted.

Those attending an AMA meeting for the first time will also discover that it would be possible to spend almost the entire time of the meeting studying the scientific exhibits where there is always a wealth of educational material, displayed graphically and where the exhibitor is usually present to answer questions or explain the various aspects of the exhibit.

Finally, no one will want to miss the industrial exhibit where pharmaceuticals, instruments, equipment, books, and services will be ready for inspection and where manufacturers' representatives will be available to discuss the wares on display.

We have planned the meeting to have something of interest, importance and value to everyone. The committee believes sincerely that you will enjoy it.

Cordially,
Huldrick Kammer, M.D.
Chairman, Program Committee

17th CLINICAL MEETING

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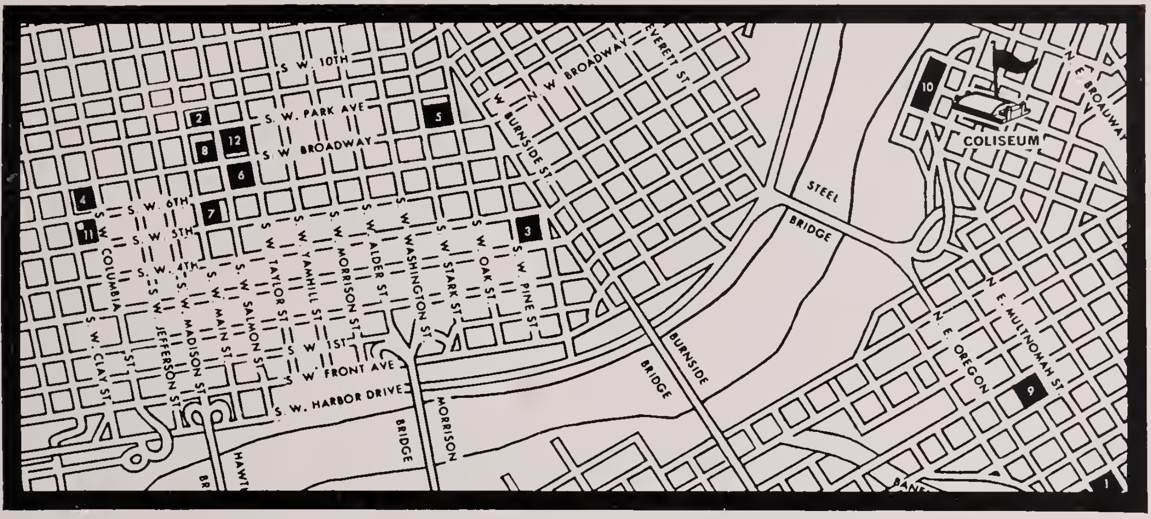

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1. Sheraton-Portland Hotel	$ 8.50	$13.85– 15.75	$13.85– 18.00	$20.00– 39.00
2. Roosevelt Hotel	$ 7.00– 8.50	$ 8.50 – 10.00	$10.00 12.00	....
3. Multnomah Hotel	$ 7.00, single or double occupancy	$10.00,	$14.00	$35.00– 50.00
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5. Benson Hotel	....	$12.50– 17.50	$15.00– 26.00	$38.00– 46.00
6. Portland Hilton Hotel	(Headquarters Hotel—No Rooms Available)			
7. Congress Hotel—(Co-Headquarters)	$ 8.00– 10.00	$10.00– 12.00	$12.00– 15.00	$20.00 .....
8. New Heathman Hotel—(Co-Headquarters)	$ 6.00– 9.50	$ 8.00– 11.00	$ 8.50– 11.00	$16.00– 25.00
9. Cosmopolitan Portland Motor Hotel	$10.00– 11.00	$14.00– 15.00	$14.50– 16.00	$28.00– 32.00
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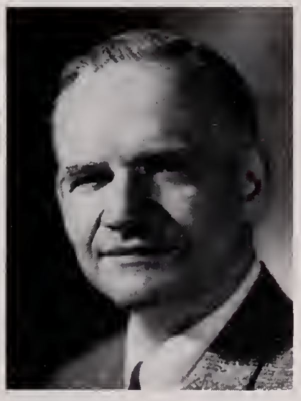
EXECUTIVE SECRETARY *Mr. R. F. Gorman, Seattle*
annual meeting September 13 - 16, 1964, Seattle

Ob-Gyn Review Course

HARRY PRYSTOWSKY, M.D.



WILLIAM F. MENGERT, M.D.

BEN M. PECKHAM, M.D.

Five guest speakers have been invited, by Charles A. Hunter of the University of Washington School of Medicine, to join members of the University faculty in presenting a well-balanced postgraduate course in obstetrics and gynecology. It will be given at the Health Sciences Building in Seattle, December 5, 6. Dr. Hunter, Professor and Chairman of the Department of Obstetrics and Gynecology, has designed it as a general review and refresher course, with special emphasis on recent clinical advances. Other faculty members participating will be Walter L. Herrmann, David C. Figge, and Wayne L. Johnson.

Guest speakers will be Harold L. Gainey, Clinical Professor of Obstetrics and Gynecology, University of Kansas School of Medicine; William F. Mengert, Professor and Chairman of Obstetrics and Gynecology, Unversity of Illinois College of Medicine; Ben M. Peckham, Professor and Chairman of Obstetrics and Gynecology, University of Wisconsin Medical School; Harry Prystowsky, Professor and Head of Obstetrics and Gynecology, University of Florida College of Medicine; and Richard E. Symmonds, Assistant Professor of Obstetrics and Gynecology, The Mayo Foundation, University of Minnesota Graduate School of Medicine.

Program will include discussions on labor in contracted pelves, prolonged labor, premature rupture of membranes, modern use of forceps, postmaturity, anatomy of uterovaginal prolapse, cystocele and rectocele, stress incontinence, and endometriosis. There will be ample opportunity to question the speakers at the round table discussions concluding the program each day.

Those interested in attending this review-refresher course should register promptly. Write to Mrs. Alice Steen, Department of Postgraduate Education, University of Washington School of Medicine, Seattle, Washington 98105.

WSHA Annual Symposium

BELDING H. SCRIBNER, M.D.

ELIOT CORDAY, M.D.

The Washington State Heart Association's Fifteenth Annual Symposium is to be held November 8 and 9 at the University of Washington. One of the general topics of interest is status of dialysis therapy in treatment of chronic uremia by Belding H. Scribner. Eliot Corday will discuss recent advances in treatment of cardiac arrhythmias and unusual clinical manifestations.

Other speakers on the program are: William Chardack, Veterans Administration Hospital, Buffalo; M. G. Criscitiello, Georgetown University Hospital, Washington, D.C.; Bernad Lown, Harvard University School of Public Health, Boston; Neal S. Bricker, Washington University, St. Louis; Marcel Legrain, Paris; and E. Donnall Thomas, The Mary Imogene Bassett Hospital, Cooperstown, New York.

Common Medical Emergencies

A course on Common Medical Emergencies will be given at the Auditorium of the Health Sciences Building at the University of Washington School of Medicine on November 21-22. The course is designed to cover a number of emergencies to be met by physicians in any field of practice.

OBITUARIES

DR. PATRICK DEEVY, *28, of Spokane, died August 21 of Hodgkins disease. He graduated from Creighton University School of Medicine in 1961. Dr. Deevy was a resident in general surgery at Sacred Heart Hospital.*

DR. CARL ERB, *who had practiced in Bellingham since 1905, died August 18. He was 83. Dr. Erb graduated from the University of Michigan Medical School in 1902, he was licensed in 1905, He was retired.*

DR. C. L. HOEFFLER, *of Everett, died August 29. His degree was granted by Starling Medical College in 1901, he was licensed in 1904. He practiced in Spokane, Skagit County, and Ellensburg before moving to Everett in 1913. He retired from active practice in 1948. He was 87.*

DR. HARVEY O. DANIEL, *74, died July 5. He had practiced in Everett 23 years prior to his retirement 6 years ago. Dr. Daniel served with the U.S. Army during World War I. He received his degree from the University of Kansas School of Medicine in 1919. Death was due to cerebral hemorrhage.*

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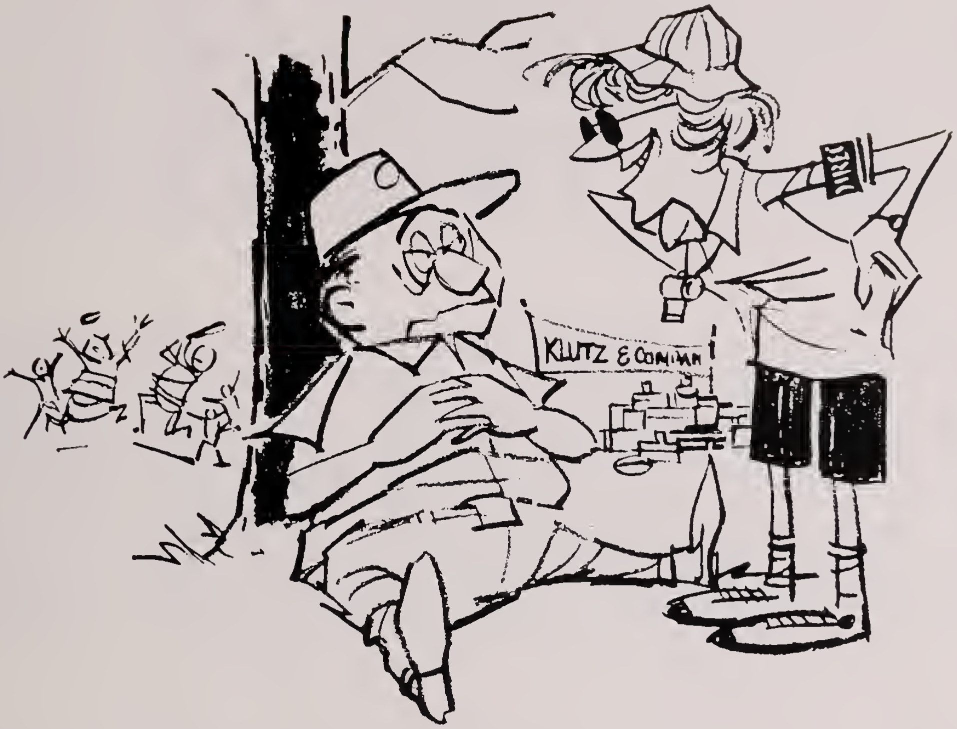

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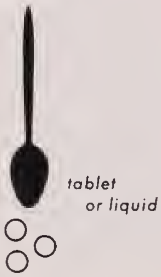

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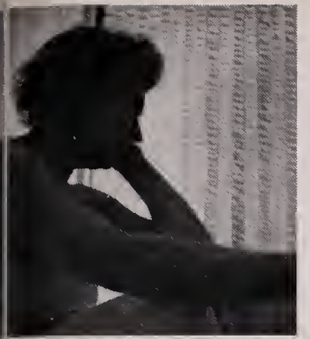

The insomniac

The tense, nervous patient

The heart-disease patient

The surgical patient

girl with dermatosis

Tension headache

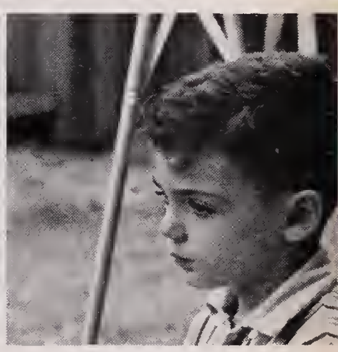
The woman in menopause

Anxious depression

remenstrual tension

The agitated senile patient

The alcoholic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EXECUTIVE SECRETARY *Mr. A. L. Bird, Boise*
annual meeting June 17-20, 1964, Sun Valley

Goals *1963-64*

I am most humble today in accepting the high office of President of the Idaho State Medical Association. I fully realize the responsibility that goes with this position and recognize that it will be no little task to follow the outstanding leadership that has been generously given to organized medicine by President Shaw and the physicians who were his predecessors.

I am very grateful for this opportunity to discuss briefly with you some of the goals which I hope we can achieve during the coming year. I recognize that without your assistance, understanding and wholehearted cooperation, and that of all members of our association, my efforts will be futile.

I personally assure you that I shall make every attempt to carry out the duties as your President, and the directives of this House of Delegates and the Constitution and By-Laws of the Idaho State Medical Association, in an honest, efficient and, I hope, effective manner.

I look forward to the challenge and accept the responsibility with VIGAH.

My door is open to you and all of the other members of our association at all times. I shall welcome your suggestions and comments.

I fully realize that we are all busy practicing physicians and that our primary interest and responsibility is that of providing unexcelled medical care for our patients, yet I can predict that even though we all are busy now, that our activities will probably increase in the coming year. As a matter of fact, I believe it is our obligation to become even busier doctors if we are to improve the public image of ourselves as individuals and as a professional group.

We are being bombarded on all sides by politicians, labor leaders and other loud critics—yes, some even within our own ranks—for the stand we have taken and the effort that has been put forth by so many of us to preserve freedom from further governmental interference in the practice of medicine and surgery.

We are being blasted with charges that we have no right to take an interest in, or be active in, politics. We are being told that we should confine our activities to caring for the sick and injured and leave all other matters, regardless of their nature, to those who proclaim they are expert in the field—even if they are experts only by their own statements.

I am sure that the average politician on almost any level, be it local, county, state or national, would much prefer to have the physician not participate in this field. I have often wondered why this resistance to our activities exists and I think that maybe I have come up with somewhat of an answer. Here are my feelings on this matter:

The average person is somewhat afraid of you. He knows that you have a college education, plus a minimum of five years additional education. He knows you have been exposed to all types of people during the educational years and and that your contacts during this period were exceptional. He knows that you are a student, that you read a great deal and he doesn't understand many of the publications you read. He knows that most people have a great deal of confidence in you and he has no way of knowing about discussions and visits you have with your patients.

He knows that you live in a better-than-average home, that your economic status is well above the average, and that you provide a service that is extremely essential and necessary.

All of these things, and perhaps many more, are the items which make the politician unfriendly to us, and gives him courage to accuse us of making medical care so expensive that the average person cannot afford it, even though medical care and your fees have risen only 95 per cent from 1940 to 1960 while everything else rose from 150 per cent to 233 per cent.

We do know that we are forced to increase the cost of medical care if we are to remain in practice and thus provide the best medical care in the world.

I personally feel that we must convince our fellow citizens that our battle is not for our own selfish gains but is a method of insuring continuation of the high standards of medical care we follow in our state today.

This leads me to comment on some of the responses that were made with regards to the membership survey conducted last year. It was indeed disheartening to see how frequent the remark was made that we, as physicians, should withdraw from any type of political activity.

This type of statement is just exactly what the socializers in the great country want us to do. I actually believe that some of our members have already been brain-washed by those who are promoting the ever increasing element of socialism.

Fortunately, most of us have good rapport with a vast majority of our patients, and I believe they will listen to our viewpoint on national legislation if we will take a moment to tell it. I feel that *if* we could obtain 100 per cent support from ALL members of the medical profession, we could exert a tremendous influence in politics.

To turn our backs on political activity, to me is to behave like the ostrich sticking his head in the sand. I do not profess to be a politician, I do not like to expound my own political philosophy to other people, but I believe that we have reached a point where it is essential that we appeal to the emotions of people.

We must point out the heritage, the traditions and the blessings of America. We must show that King-Anderson and similar legislation will insidiously erode, eat away and, yes, eventually destroy America. Deep in my heart, I feel that the people of Idaho and America are still dedicated to the principles of our forefathers, and that none of us will dump our heritage for a mess of pottage or support the destruction of our American system.

I don't think I have to remind you that the forces of government are inclined in this direction and they are being assisted by many persons in the labor ranks in exerting every political tactic, ethical or unethical, to accomplish their goal.

Though we do not have an election in Idaho during the next 12 months, I believe we should be shoring up our political organization—Idaho Medical Political Action Committee—with money and activites.

I assure you that I shall do everything possible to extend the service of the Idaho State Medical Association and its officers and councilors to you as members of the House of Delegates, to your component society and to you as individual members.

Should it be necessary to call an Interim Session of the House of Delegates, it will be done.

If your local societies have problems too difficult to handle on a local level, I believe you are entitled to request the services of the state association. We shall be happy to extend aid and service through the proper committees or personnel who might attempt to resolve the problems to the best advantage of all concerned.

I should like to dwell on this matter for a moment. I have strongly felt for some time now that we have problems in our component societies that sometimes cannot be handled satisfactorily at the local level. Often times we are standing too close to the trees to see the forest. I believe it is occasionally better to have an outside, unbiased, unprejudiced, competent individual or committee evaluate a situation in a manner which cannot be done locally, even though every effort is made to solve the problem locally.

It was pleasing to me to learn, from the survey, that the membership overwhelmingly endorsed the functions of the House of Delegates. A total of 255 members expressed the confidence that you were functioning properly. Eleven said they didn't think you were, while 39 failed to answer the question.

This certainly indicates to me that the House of Delegates, under our Constitution and By-Laws, is functioning in an efficient and effective, representative manner. We shall never be able to completely satisfy all of our members, and though we can not ignore opposition, we must move forcefully ahead knowing that we have the sanction of the majority of our membership.

On the other hand, I was somewhat disheartened by the answers received to the question: "Are you interested in serving actively on a committee of the Association?" We received 155 "yes" answers, 100 replied in the negative and 40 failed to respond.

Gentlemen, if we do not take an interest and make a small sacrifice of time and effort to serve organized medicine, we shall either perish of our own inaction or we shall be destroyed by internal or external forces. Sometimes I wonder if some of our members practice medicine in a manner similar to their comments. Specifically, I have in mind the doctor who is constantly complaining about things the association is doing or not doing. No matter which it may be, he is full of advice and suggestions. Then comes the moment of truth! He is asked to do a job and a galaxy of reasons why he can not because he is so busy, etc., bubble forth like a bottle of soda water.

We must serve actively. Yes, it does take time and it costs money, but we can only hire a certain amount of professional help. Therefore, we as individual physicians, must function actively in all of the facets of our organization or we shall perish.

Some say they have been appointed to committees which never meet. This is essentially true, but experience has shown that certain standing committees must exist actively or inactively. They must be there in case we need to activate them.

We don't form a fire department to fight a fire after it has started, yet the fireman may not be called to a fire for months, or possibly years. I urge you to extend your services, and if you are appointed to a committee, that you serve. The efficiency of our organization depends upon you.

Unfortunately, like all organizations, the job often gets assigned to the old reliables who have served so well in the past, and this is the objection that some physicians have made when they say that the organization is run by a small group or clique. This is not your officers' intention, but when a job needs to be done we often are obliged to ask those who have done a job before, to do another, equally well.

We would welcome the opportunity to increase the number of active leaders in organized medicine, not only to alleviate the burden on the few who do the job, but better to represent the thinking of our entire membership.

An item in which I have been interested for some time, and intend to refer to a committee for further study during the coming months, is the possibility or feasibility of establishing a physician-sponsored and operated welfare fund for needy and deserving physicians. I was encouraged by the answers in the membership survey in that 113 members said they were in favor of such a program. Frankly, this is only in the thinking stage. Such programs have been established in other states, primarily New York, where of course they have a much larger physician population. But in this day when all large companies, organizations, businesses, and labor unions establish a perpetuating fund for such purpose for their members, it appears to me that we as physicians should do likewise for the security of ourselves, our colleagues and our families.

Such a program would require a good deal of investigation and evaluation, but it seems to me that with a reasonable monthly or yearly fee earmarked for this purpose, that we could accumulate a considerable sum of money which, if properly invested, would enable us to establish a welfare fund for the use of our colleagues in need of a helping hand.

Personally, I will not be happy until it has been proven to me that it is infeasible, because I believe that we physicians, with our incomes, can well afford to embark on such a program if it is submitted and fully explained to our membership. I sincerely hope that something concrete along this line can be presented in a formal document at the next meeting of the House of Delegates.

In closing, I would like to leave you this thought: I beg of you to go home with the enthusiasm which you have shown in the discussion of the problems presented before this House of Delegates. Please do not forget what we have done and accomplished. You have a folder containing much of the association work, and during the next month you will be provided with additional information through the News Letter. Go home and spread your enthusiasm to the members of your society who did not attend this meeting.

Try to stimulate the members who have not taken an active part previously. Assure the members their organization is working for their benefit at all times, and if they have any questions, answer them. You are a member of the House of Delegates of the Idaho State Medical Association.

Thank you for your attention. I believe we have accomplished a great deal in this meeting of the House of Delegates. Let us all accept the challenge of the next twelve months with dedicated purpose of improving our Organization so that it may work for the benefit of all of us.

NO UNEMPLOYMENT BY YEAR 2000

The most striking feature about the U. S. Federal Government today is its size. The number of Federal employees has reached a peacetime high of 2.5 million. The cost of the Federal civilian payroll rose to $15 billion in 1962 and is expected to total $15.6 billion by June 30, 1964. Thirty states have more Federal employees than state employees. It is estimated that if present trends continue, every one of us will be working for the government by the year 2000.

Austin Smith, M.D., President, Pharmaceutical Manufacturers Association, to Advertising Club of St. Louis, Mo., Feb. 6, 1963.

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NATIONWIDE COMPARISON OF MICROBIAL SUSCEPTIBILITY TO 5 LEADING ANTIBIOTICS

The 1963 antibiotics survey is unprecedented in its scope. In all, susceptibility results of 9,331 cultures were collected from 66 hospitals in 26 states. The bacteria studied were isolated from overt clinical infections, and tested by the disc sensitivity method for susceptibility to five widely-used antibiotics.

Each participating hospital laboratory reported the over-all susceptibility of all bacteria studied each week. The data thus collected were then compared and analyzed by electronic data processing equipment.

The in vitro findings indicate the over-all superiority of TAO (triacetyloleandomycin) over four leading antibiotics against Staphylococcus aureus (coagulase positive), Streptococcus pyogenes (beta-hemolytic), Diplococcus pneumoniae and Streptococcus pyogenes Group D (enterococcus). These 1963 data broaden and confirm the 1962 study of 9,872 cultures in this continuing hospital survey of antibiotics[2].

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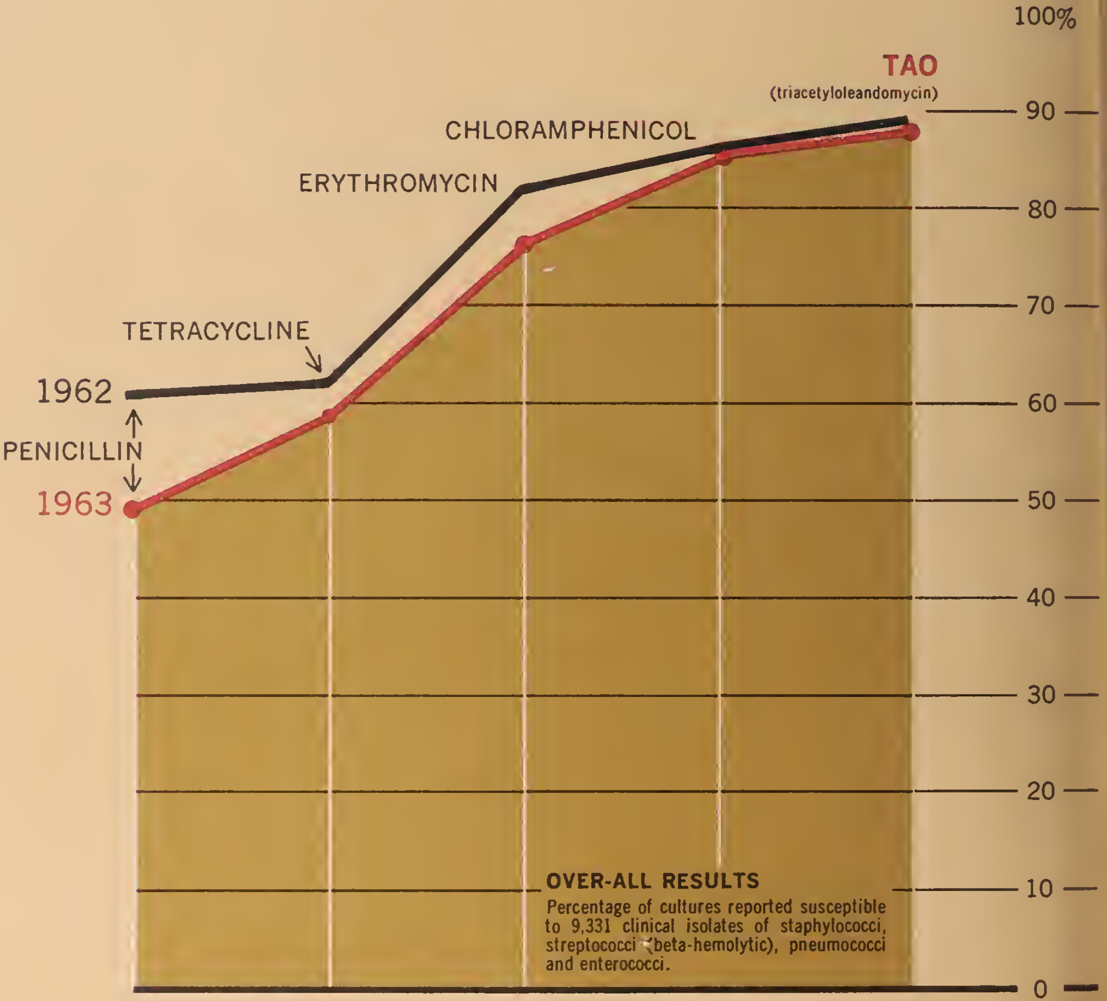
1963

TAO
(triacetyloleandomycin)

NOW FROM 66 HOSPITALS...

RESULTS FROM new 1963 NATION-



OVER-ALL RESULTS
Percentage of cultures reported susceptible to 9,331 clinical isolates of staphylococci, streptococci (beta-hemolytic), pneumococci and enterococci.

SUSCEPTIBILITY RESULTS BY ORGANISM

	Staphylococcus (coagulase positive) (5440)	Streptococcus (β-hemolytic) (1519)	Pneumococcus (1130)	Enterococcus (1242)
TAO (triacetyloleandomycin)	88.0%	95.2%	97.1%	63.9%
Erythromycin	68.9%	96.7%	96.7%	68.5%
Tetracycline	50.9%	79.9%	92.9%	36.6%
Chloramphenicol	82.2%	94.2%	96.8%	72.3%
Penicillin	27.0%	94.9%	96.8%	45.0%

(figures in parentheses indicate total number of cultures)

WIDE SURVEY OF ANTIBIOTICS[1]

Staphylococcal Susceptibility. Through the use of electronic data processing equipment, the 1963 antibiotics survey reveals other important data on relative antibiotic effectiveness. One example of this is the number and percentage of staphylococcal cultures susceptible to none of the antibiotics studied, to one antibiotic only, and to all five antibiotics. Significantly, only 3.7% of staphylococcal cultures were resistant to all five of these frequently-prescribed antibiotics. About 21% of all staphylococci cultures were susceptible to all five antibiotics.

THE FOLLOWING CHART SHOWS THE DATA COMPILED WHEN ONLY ONE ANTIBIOTIC COULD CONTROL THE STAPHYLOCOCCI. AS SHOWN, THE CHART INDICATES HIGHEST LIKELIHOOD OF SUCCESS WITH TRIACETYLOLEANDOMYCIN AND CHLORAMPHENICOL, IN THAT ORDER.

Confirmed Clinically. This massive in vitro data further supports clinical findings. As an example, Shubin[3] found that of 129 patients with upper or lower respiratory infections treated with TAO (triacetyloleandomycin), 120 had a good response. A "good" response generally showed "reduction in temperature and toxicity within 48 hours after initiation of therapy, with subsequent clinical and bacteriological cure of infection."[3]

References: 1. Isenberg, Henry D., Ph.D.: "Nationwide Comparison of Microbial Susceptibility with Standardized Discs." Scientific Exhibit presented at the meeting of the American Medical Association, Atlantic City, N. J., June 16-20, 1963. 2. Fowler, J. Ralph, Watters, John L. and Levy, Arthur M.: Bacterial Susceptibility Patterns as Related to Geographic Variation and Anatomical Source, Clinical Medicine, 70:547 (Mar.) 1963. 3. Shubin, H. et al: Further Clinical Studies with Triacetyloleandomycin, Antibiotic Med. and Clin. Ther., 6:156 (Mar.) 1959.

Number of antibiotics effective	Number and percentage of cultures susceptible				
	Chloramphenicol	Erythromycin	Penicillin	Tetracycline	Triacetyloleandomycin
One	246 (4.5%)	14 (0.2%)	11 (0.2%)	15 (0.3%)	327 (6.0%)

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indications: The bacterial spectrum for which TAO (triacetyloleandomycin) primarily is effective includes staphylococci, streptococci, pneumococci and gonococci. It is recommended for acute,severe infections where adequate sensitivity testing has demonstrated susceptibility to this antibiotic. It has been shown to be particularly effective in acute, severe infections of the respiratory tract, bones and joints, genitourinary tract and in staphylococcal enterocolitis. It is not recommended for prophylaxis or in the management of infectious processes which may require more than 10 days continuous therapy. In view of the possible hepatotoxicity of this drug, when therapy beyond 10 days proves necessary, other less toxic agents, of course, should be used unless the organism is resistant to those agents, or in those cases where hypersensitivity precludes their use. If clinical judgment dictates continuation of therapy for longer periods, serial monitoring of liver profile is recommended, including BSP, transaminase (SGOT) and cephalin flocculation tests.

precautions and side effects: *Use of this drug may produce alterations in liver function tests and jaundice. Clinical experience available thus far indicates that these liver changes were reversible following discontinuation of the drug.* A review of studies by several independent investigators and reports from practicing physicians indicate that liver function abnormalities may occur in a significant number of patients following two weeks or more of continuous therapy with triacetyloleandomycin at 1.0 gram per day in divided doses. Clinical symptomatology, including jaundice, has been observed infrequently in these individuals. The drug is not recommended for subjects who have shown abnormal liver function tests or hepatotoxic reactions to it. Based on the use of this drug over a period exceeding 5 years, the incidence of jaundice considering all reports referable to this effect is 6.3 per million courses of therapy. When only those which definitely can be related to this drug are equated to usage, the incidence is 1.8 per million courses of treatment.

Although reactions of an allergic nature due to this drug are infrequent and seldom severe, those of the anaphylactoid type have occurred on rare occasions.

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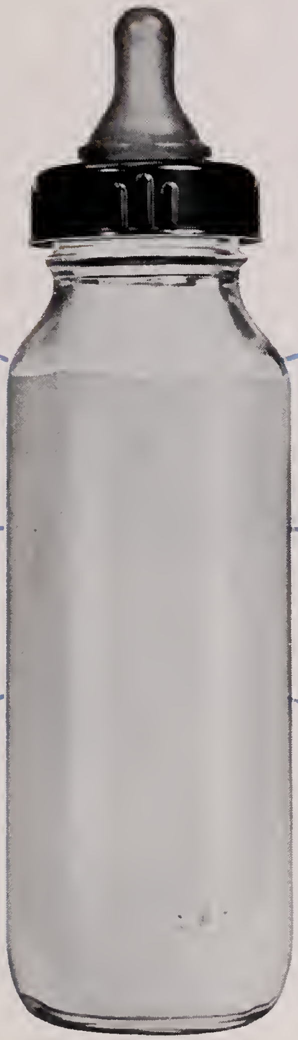

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SIDE EFFECTS: Nervousness, insomnia, anorexia, nausea, dizziness, palpitations, headache, drowsiness.

DOSAGE: 10 to 20 mg. b.i.d. or t.i.d.

SUPPLIED: *Tablets*, 5 mg. (pale yellow), 10 mg. (pale blue) and 20 mg. (pale orange).

REFERENCES: 1. Siegler, P. E., in Nodine, J. H., and Moyer, J. H. (Editors): *Psychosomatic Medicine*, The First Hahnemann Symposium, Lea & Febiger, Philadelphia, 1962, p. 582. 2. Lapolla, A.: Western Med. *2*:383 (Sept.) 1961. 3. Yoss, R. E., and Daly, D. D.: Pediatrics *25*:1025 (June) 1960.

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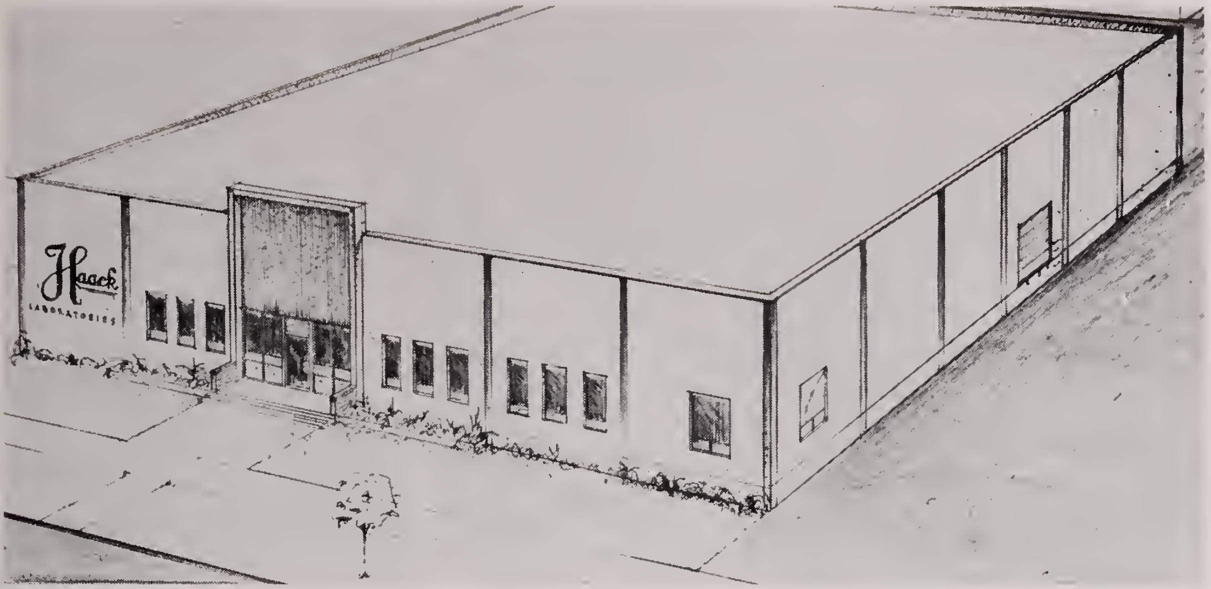

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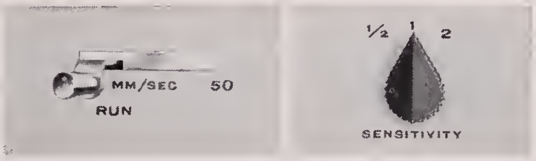

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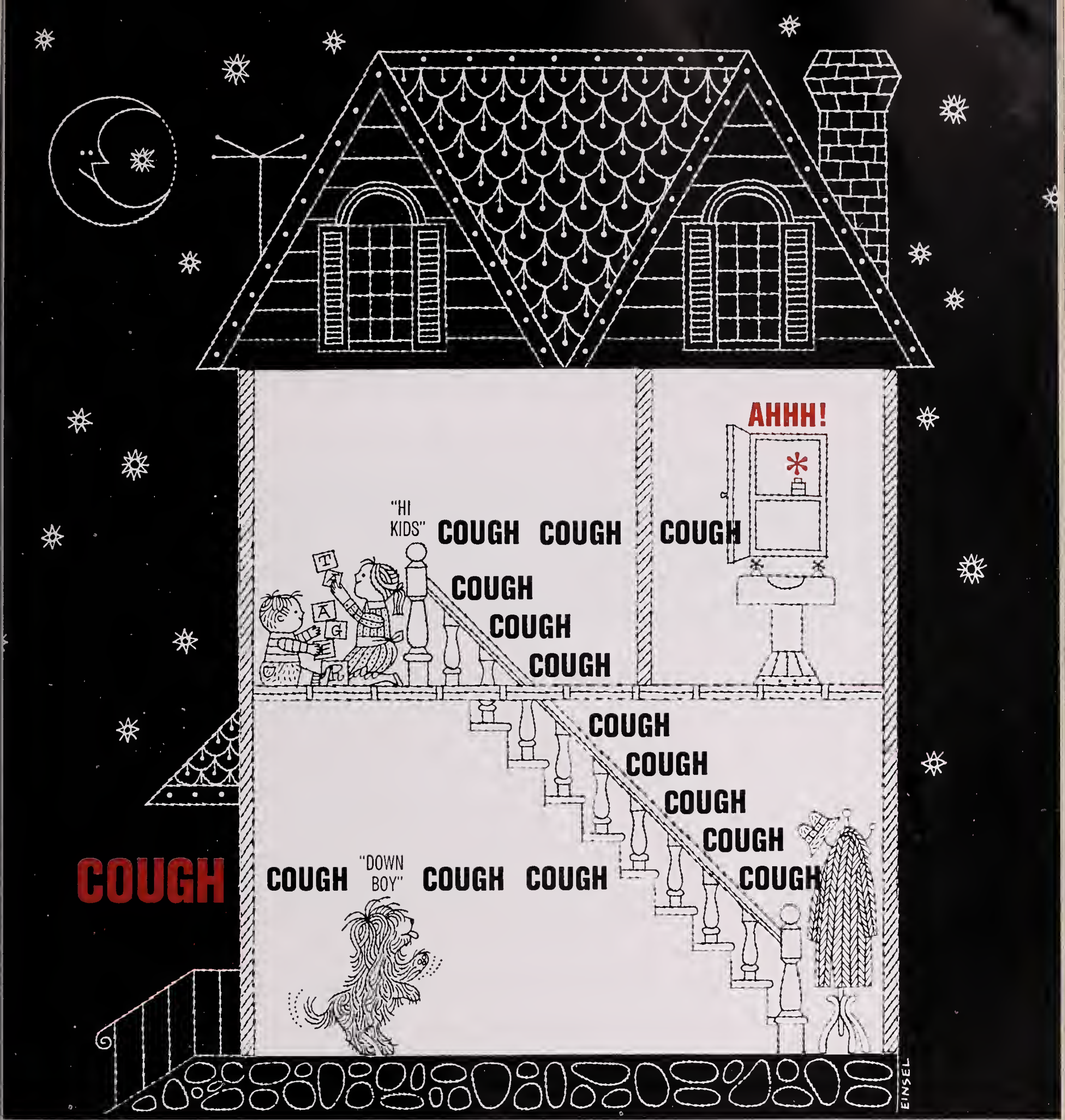

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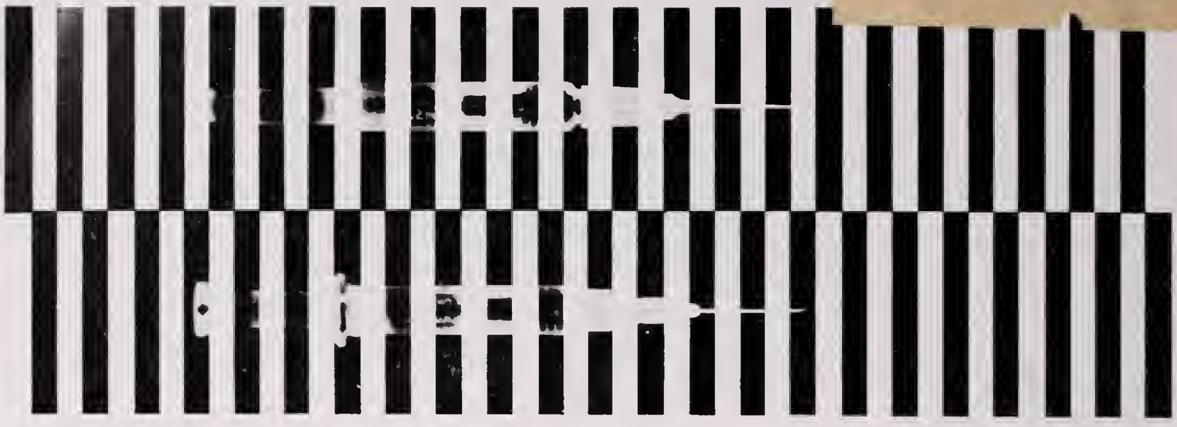

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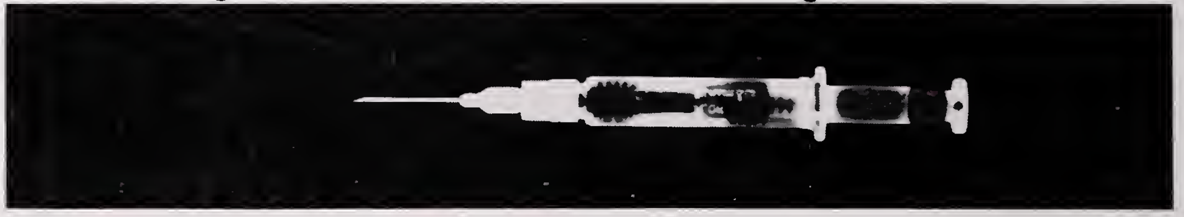

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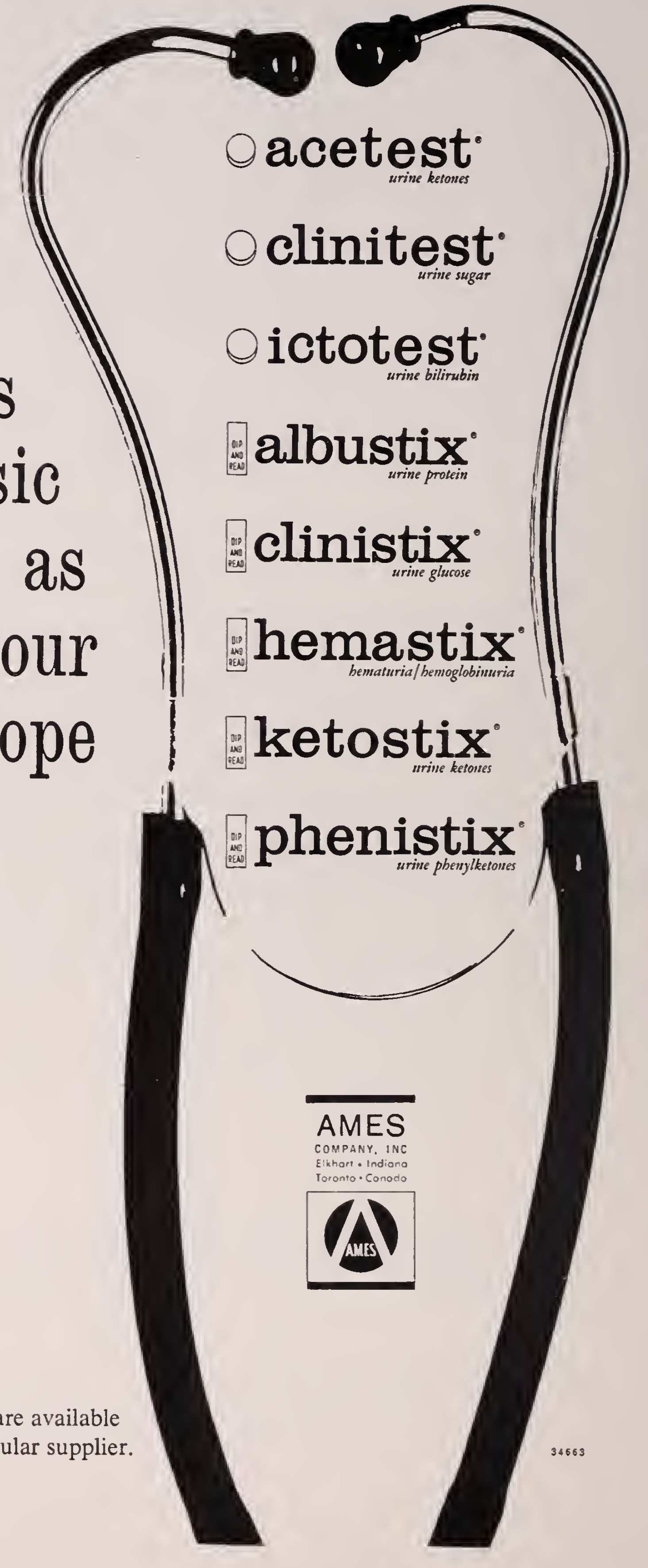urine
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No need to write three separate prescriptions for antitussive, decongestant and analgesic relief of common cold, flu or grippe symptoms when it is therapeutically correct... economically sound... to specify

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Codeine Phosphate*	15 mg.
'Sudafed'® brand Pseudoephedrine Hydrochloride	20 mg.
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Phenacetin	150 mg.
Aspirin	200 mg.
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*Warning—may be habit forming

'Emprazil-C' Tablets are available on prescription only.

Dosage: Adults and children over 12 years—1 or 2 tablets—3 times daily as required. Children 6 to 12 years—1 tablet—3 times daily as required. **Caution:** While pseudoephedrine is virtually without pressor effect in normotensive patients, it should be used with caution in hypertension. Also, while chlorcyclizine has a low incidence of antihistaminic drowsiness, the usual precautions should be observed. **Supplied:** Bottles of 100 tablets.

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When lethargy is a medical problem—in convalescence, chronic fatigue, mild depression, menopause, oversedation, and senility, for example—the gentle stimulant action of Ritalin (methylphenidate hydrochloride) restores normal physical and mental activity.

In his report, Siegler[1] states: "In mild depression or in clinical exhaustion syndromes, a marginal sympathomimetic drug like methylphenidate seems to be the drug of choice for initiating therapy. It does not have the toxic effects found with the amphetamines or with the hydrazines or other antidepressants."

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"No significant toxic effects have resulted after the continuous administration of methylphenidate for more than 3 years."[3]

INDICATIONS: Chronic fatigue.

CONTRAINDICATIONS: Marked anxiety, tension, and agitation.

CAUTION: Should not be used to increase mental or physical capacities beyond normal limits. Use cautiously with epinephrine or levarterenol.

SIDE EFFECTS: Nervousness, insomnia, anorexia, nausea, dizziness, palpitations, headache, drowsiness.

DOSAGE: 10 to 20 mg. b.i.d. or t.i.d.

SUPPLIED: *Tablets,* 5 mg. (pale yellow), 10 mg. (pale blue) and 20 mg. (pale orange).

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Ritalin® **hydrochloride (methylphenidate hydrochloride CIBA)**

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When you recognize signs of depression and anxiety and associate them with an organic condition—add 'Deprol' to your therapy.

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meprobamate 400 mg. + benactyzine hydrochloride 1 mg.

BRIEF SUMMARY: *Indications:* Depression, especially when accompanied by anxiety, tension, agitation, rumination or insomnia. *Side Effects:* Slight drowsiness and, rarely, allergic reactions, due to meprobamate, and occasional dizziness or feeling of depersonalization in higher dosage, due to benactyzine, may occur. Meprobamate may increase effects of excessive alcohol. Use with care in patients with suicidal tendencies. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction. Withdraw gradually after prolonged use at high dosage. *Complete product information available to physicians on request.*

USUAL ADULT DOSAGE: 1 tablet q.i.d. May be increased gradually, as needed, to 3 tablets q.i.d.; with establishment of relief, may be reduced gradually to maintenance levels.

SUPPLIED: Light-pink, scored tablets. Bottles of 50.

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This department is a forum, provided for free individual expression. Letters are published as received and given little or no editing. Proof is submitted when time permits, before publication. Responsibility for statements rests with the authors of these communications and not with this journal which strives only to protect the right of individuals to speak for themselves. Ed.

Dusting with Tetraethylpyrophosphate

EDITOR, NORTHWEST MEDICINE*:*

In answer to your request for information concerning the highly publicized insecticidal spraying incident of August 10, 1963, in Toppenish, Washington, I have had the following account prepared.

Airplane dusting with Tetraethylpyrophosphate (TEPP) was done late in the afternoon, because a high temperature is conducive to a maximum kill of mites in hop fields. It was anticipated the dust cloud might drift to the south, so in accordance with accepted procedure, people south of the sprayed fields were warned that dusting would occur. Air movements, however, unexpectedly carried a cloud of the dust into a land depression to the north. Shortly thereafter Mr. Ray Cerna, who lived some 700 feet north from the dusted area, found two of his cattle dying and 13 others with symptoms. His children and grandchildren joined him to observe the cattle. At this time Mr. Cerna and the others began to cough, notice tightness in the chest, and experience varying degrees of dizziness.

Alarmed by the death of the two cattle and beginning symptoms in his own family, Mr. Cerna spread the word that a cloud of TEPP was in the neighborhood and was dangerous.

The local sheriff's office, State Patrol, and Civil Defense personnel evacuated all people within one square mile. Forty-one people were sent to the hospital for a check to make certain no human life was in jeopardy. Of the people examined, 15 gave histories which could have represented symptoms of poisoning. All signs had subsided by the time the attending physician saw them, except for the most heavily exposed persons. Their shortness of breath, which was mild, lasted for a few hours. Miosis, usually given as a prominent symptom, was absent at the time of examination. Blood tests indicated that even those with symptoms showed slight or no change in cholinesterase levels. Two local physicians who saw the patients report no lasting ill effect. All symptoms began within an hour of application of the TEPP and were reported as follows: Cough (within minutes after the dusting), tightness of the chest, and dizziness.

G. E. Quinby, M.D., Medical Toxicologist, of U.S. Public Health Service at Wenatchee was consulted by phone by the attending doctor shortly after the patients came to the hospital. Advice in diagnosis and management was given that evening. The next day, Dr. Quinby and Mr. Homer Wolfe, entomologist, made an on-site investigation of the incident.

The possibility that there was an inadvertent violation of regulations is being considered, but no evidence has been discovered so far that such violation occurred.

From our Toppenish experience we have gained certain impressions which may be of assistance to others in preventing possible loss of human life:

A. We have been repeatedly warned that the organic phosphate insecticides are dangerous. The incident which took place, and resulted in mild illness in humans and the death of two cattle, should reinforce this fact. We are all anxious to see the economic gains made possible by judicious use of insecticides. Nevertheless we cannot condone a hazard to human life. Those purchasing applications, those making applications, and those agencies responsible for regulating applications, must realize their responsibilities in assuring the protection of citizens.

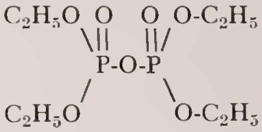
B. Symptoms may occur almost immediately after exposure. All physicians should be alerted and be prepared to deal with accidental poisoning in any area where insecticides are extensively or regularly used. A state of preparedness requires knowledge of the insecticides being used, awareness of the signs, symptoms, and treatment for each, and availability of the physician within minutes to the place of exposure.

C. All those planning to use dangerous insecticides should select a physician ahead of time for the diagnosis and care of any illness that might arise. Since it must be differentiated from more common causes of illness, such physicians should be furnished labels of materials being applied as well as the approximate periods of application. Some states have laws which make this mandatory, but even in these states cooperation and teamwork between all parties concerned prevents more accidents than the mandatory clause of the law.

D. Interested physicians are urged to take the time to become acquainted with insecticides and teach those of their patients who use them the respect they deserve.

In view of the present interest in TEPP, every physician should keep in mind the following facts:

1. The residual life of TEPP is very short under practical conditions of application. However, for safety's sake, the latest application before harvest has been specified by the U.S. Dept. of Agriculture as 3 days.
2. Truck gardners should be advised not to eat or distribute crops for consumption for three days after application.
3. Chemical formula of TEPP Tetraethylpyrophosphate:



4. Formulations: Concentrates (solutions of the organophosphates and emulsifiers in an organic solvent) up to 50 per cent or more; field use 0.025 per cent to 0.4 per cent; aerosols from 0.5 per cent to 4 per cent; dusts from 0.5 per cent to 2 per cent.
5. Used in control of aphids, mites and other soft bodied arthropods.
6. Routes of absorption: Through all portals. Several persons, including children have died after spilling material on the skin.
7. Signs and symptoms of poisoning in man are to a great extent secondary to cholinesterase inhibition. The usual symptoms include headache, giddiness, nervousness, blurred vision, weakness, nausea, cramps, diarrhea, and discomfort in the chest. Signs include sweating, miosis, lacrimation, salivation, excessive respiratory tract secretions, vomiting, cyanosis, papilledema, uncontrollable muscle twitches, convulsions, coma, loss of reflexes and loss of sphincter control. The last four signs are seen only in advanced cases, but do not preclude a favorable outcome if energetic treatment is continued. Following smaller doses, onset of illness is sometimes delayed for an hour or more, and may occur at home after work exposure. If onset begins more than 12 hours after exposure, the illness is probably due to some other cause. One must be cautious, however, in assuming that exposure isn't continuing from contaminated clothes. In occupa-

continued on page 856

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Antispasmodic sedative
Natural alkaloids of Belladonna

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BELAP No. 0 Formula	
Belladonna Extract	⅛ gr.*
Phenobarbital	⅛ gr.

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Belladonna Extract	⅛ gr.*
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BELAP No. 2 (Scored) Formula	
Belladonna Extract	⅛ gr.*
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**Equivalent 5 minims Tinct. Belladonna; USP.*

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continued from page 854

tional cases, relatively incapacitating symptoms of nausea, cramps, discomfort in the chest, and muscular twitching, often occur two to eight hours after an initial giddiness, blurred vision, and headache.

While miosis has been emphasized as a prominent sign, it may not be apparent as in the cases at Toppenish. It may appear late, or there may even be a mydraisis, perhaps as a nonspecific reaction to discomfort and apprehension. Treatment should not be delayed because of absence of miosis if definite exposure has been determined.

8. Differential diagnosis includes: cerebral vascular accident, heat stroke, heat exhaustion, hypoglycemia, gastroenteritis, and pneumonia.

9. Treatment.

a. Artificial respiration if required. (Do not give atropine to a cyanotic patient; give artificial respiration first.)

b. Atropine sulfate, 2 to 4 mg (1/30 to 1/15 gr) intravenously as soon as cyanosis is overcome. Repeat at 5 to 10 minute intervals until signs of atropinization appear (dry, flushed skin, and tachycardia as high as 140 per minute). Some physicians have believed the large dose to have been a mistake. A lesser dose is, however, ineffective. If the case is less severe, however, the atropine dosage can be cut in half.

c. Give pralidoxime choride (2-pyridine aldoxime methochloride) (2-PAM) I.V., 1 gram for adults and 0.25 gram for infants. Repeat as often as the signs of poisoning return.

d. Decontaminate skin, using soap and water followed by ethyl alcohol. (Many of the organic phosphorus insecticides are more soluble in alcohol than water.)

e. Decontaminate stomach and eyes as indicated. If pulmonary or gastric secretions have accumulated they should be removed.

f. Symptomatic treatment

Never give morphine, theophylline, or aminophylline. Large amounts of intravenous fluids are generally contraindicated because of excessive fluid in the respiratory tract. Use tranquilizers with great caution, there is some evidence of their being containdicated. I tis certain that promazine and chlorpromazine increase mortality in experimental animals poisoned by parathion.

10. Watch the patient constantly since the need for artifical respiration may appear suddenly. Have equipment readily available. The acute emergency lasts 24-28 hours and the patient should be watched continuously during this time. Favorable response to one or more doses of atropine does not guarantee against sudden and fatal relapse.

11. It is believed cholinesterase values of 0.5 or less for either cells or plasma represent abnormal depressions for most individuals. If a cholinesterase determination is desired, collect 10cc of heparinized blood using caution to prevent hemolysis or dilution. Centrifuge 15 ml. at 2000 RPM and separate plasma and RBC. Discard WBC and plasma at surface of RBC. Stopper plasma and RBC in separate tubes with polyethelene or rubber stoppers and marked refrigerate (do not freeze). Ship refrigerated (not with dry ice), marked "Perishable", "RUSH", "Refrigerate", "DO NOT FREEZE", Physicians should contact the laboratory of their choice to see if such examinations are made or to learn where such specimens should be shipped.

12. Reference: Technical information obtained from Clinical Handbook on Economic Poisons, Emergency Information for Treating Poisoning, U.S. Dept. HEW, PHS Publication No. 476, Revised 1963. U.S. Government Printing Office, Washington, 25, D.C., Price 55 cents. (A publication which every physician who may be called upon to deal with economic poisons should have.)

Sincerely,

BERNARD BUCOVE, M.D., D.P.H.
State Director of Health

Electronic Bookkeeping Made Available

EDITOR, NORTHWEST MEDICINE:

Kitsap Physicians Service will provide private patient billing and accounting service for its member doctors starting January 1, 1964.

There are two main reasons for deciding to provide this service. First, because our organization is operated for and controlled by the doctors, we can provide the best possible service to doctors at a very low cost. Second, by contributing its fair share to overhead, the new service will help reduce the overhead burden on normal bureau work. Doctors subscribing to the service will be provided with legibly printed, well detailed statements for mailing to each patient account. The doctor will also receive an accurate analysis of all billings and receipts suitable for income tax purposes. He will be provided with a regular trial balance, aged to show the status of the delinquent accounts and the length of time since last payment. He will also be furnished with complete statistical analysis of types of service by number of times performed and total amount billed for each category of service. He will get a detailed accounting of third party receivables and regular analysis of revenue by source (private accounts, private insurance companies, medical plan, V.A., etc.).

We are still seriously considering providing the doctor with a complete annual or semi-annual analysis of service to each patient that would serve as a patient history and as a source of tax information for the patient. Our philosophy is to provide the doctor with the most complete accounting package possible at a single low price based on the number of monthly statements. We selected this basis rather than a per transaction basis to encourage fullest possible utilization and, therefore, greatest possible benefit from the system. There will be no additional charge for the special analysis and reports.

This system will utilize IBM data processing equipment already being used for normal bureau activities. Each doctor's office will be equipped with an IBM 1001 Data Transmission Terminal. This desk sized unit will be used by the doctor, or his nurse, to transmit accounting information over regular telephone circuits to the Kitsap Physician Services office. The data, when received, will be completely ready for machine processing.

A typical transaction would work in the following way: Each chart file will contain a small card identifying the patient. When a service has been performed, the doctor or nurse will dial a special telephone number at Kitsap's office. The receiving machine will automatically answer the telephone and make itself ready to receive the incoming data. By placing the patient's card in the transmitting terminal, the doctor's office will cause an IBM card to be punched with the patient name and number. A small keyboard, much like a regular adding machine, will be used to transmit the type of service code and the amount to be charged. The transmission system will check itself and signal the doctor's office as to whether or not the transmission was correctly received. The doctor's office can then proceed to transmit the next transaction, and so forth until all have been sent to the processing center.

The IBM machines at Kitsap's main office will be used to prepare a daily transaction register which

continued on page 859

The containers shown are the present day Don Baxter, Inc. container and its ancestors. As a matter of fact, the one marked 1928 is the first successful parenteral fluid container made by any company anywhere.

The fact that Don Baxter, Inc. made the first parenteral container is a source of considerable pride to us, but the pride would be hollow if we had not improved the container as medical science and technology advanced. Don Baxter, Inc. *has* moved ahead and has contributed significantly to the field of parenteral therapy in its 35-year history.

Today, we offer a complete line of solutions and the simplest and safest method of transporting them into your patient's vein. Perhaps this is why Baxter solutions and sets have the largest hospital acceptance in the West.

We would like to use this 35 years of know-how to serve you.

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Not with the Baxter parenteral system. The latex membrane has only one "dimple," one obvious place to add medication before administration. No more dislodged air tubes or wasted medication.

This simplicity of design is typical of all aspects of the Baxter system. It is one more reason why we say that "the difference is medical engineering." Medical engineering recognizes that simplicity of operation reduces the possibility of error at your patient's bedside. Medical engineering gives you . . .

SAFETY THROUGH SIMPLICITY

BAXTER

DON BAXTER, INC. GLENDALE, CALIF.

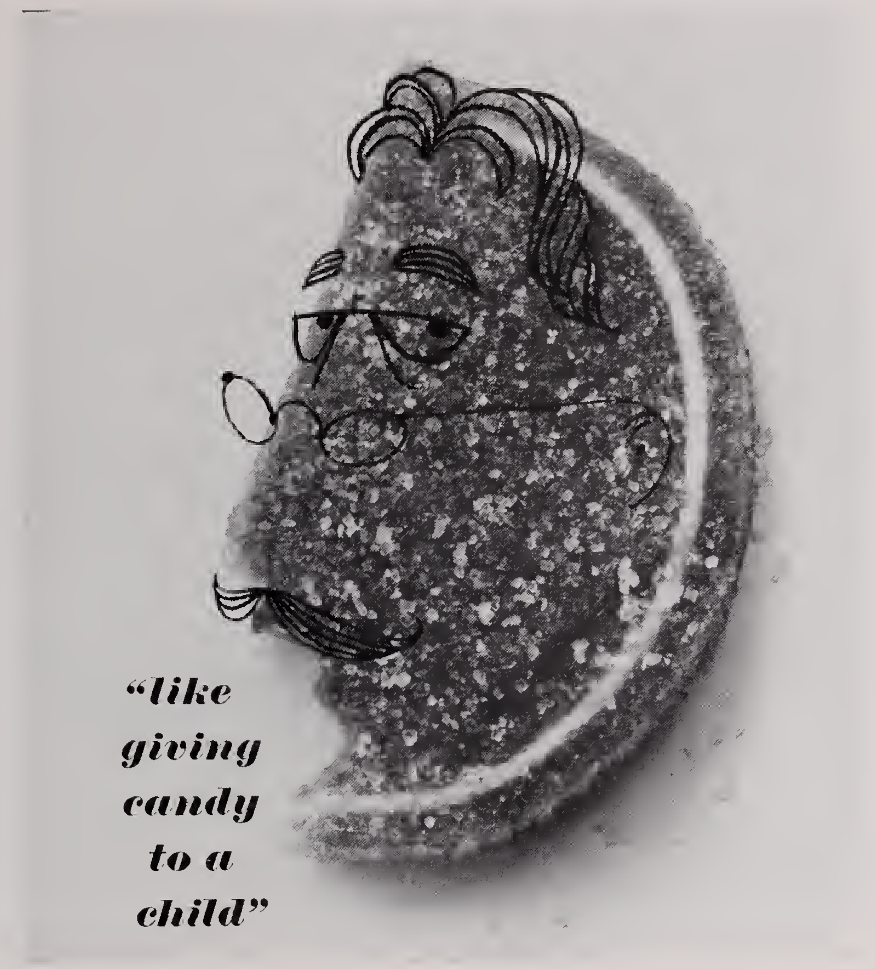
continued from page 856

the doctor's office will receive in the following day's mail. This will show each transaction in detail and the total of cash received, charges billed, and other necessary accounting information. On a monthly basis the same data will be reprocessed through the machines to provide the trial balance, the patient's statements, and other analyses.

Sincerely,

FRANK C. TAYLOR, M.D.

Chairman, Board of Trustees



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These fruit-tasty, delicious treats with a great big nutritional plus can be chewed or sucked (melt readily in mouth) and leave no unpleasant aftertaste. Makes it so easy for mothers to help assure toddlers and older children an adequate supplementary intake of vitamins essential to their normal growth, development and health . . . and with just one tablet daily. M-m-m-most delectable too . . . VI-SYNERAL CHEWABLE TABLETS . . . to support nutrition in geriatric, chronically ill, convalescing, dieting and other patients. In bottles of 100.

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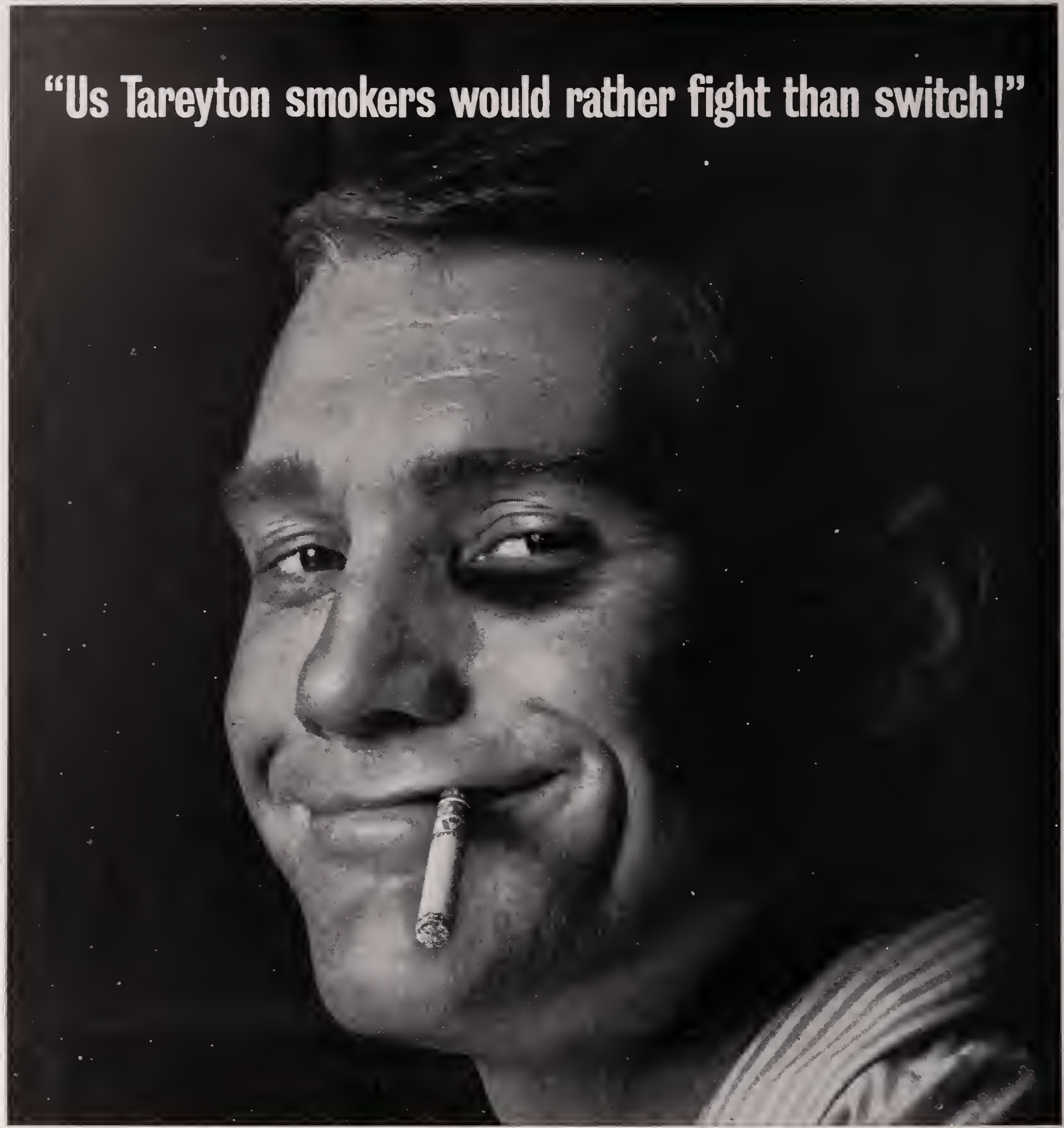
VITAMIN A/5,000 U.S.P. UNITS ■ VITAMIN D 500 U.S.P. UNITS ■ ASCORBIC ACID (C)/75 mg. THIAMINE MONONITRATE (B_1)/1.5 mg. ■ RIBOFLAVIN (B_2)/0.5 mg. ■ PYRIDOXINE HCl (B_6)/2 mg. ■ VITAMIN B_{12}/3 mcg. ■ NIACINAMIDE/10 mg. ■ d, CALCIUM PANTOTHENATE/2 mg. ■ VITAMIN E/1 INT. UNIT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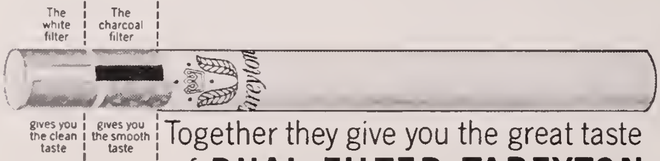
Join the Unswitchables and enjoy the great taste that inspires their aggressive loyalty.

Tareyton, of course, is famous for fine tobacco. Now see how the Activated Charcoal filter works with the white filter to actually improve the fine tobacco taste:



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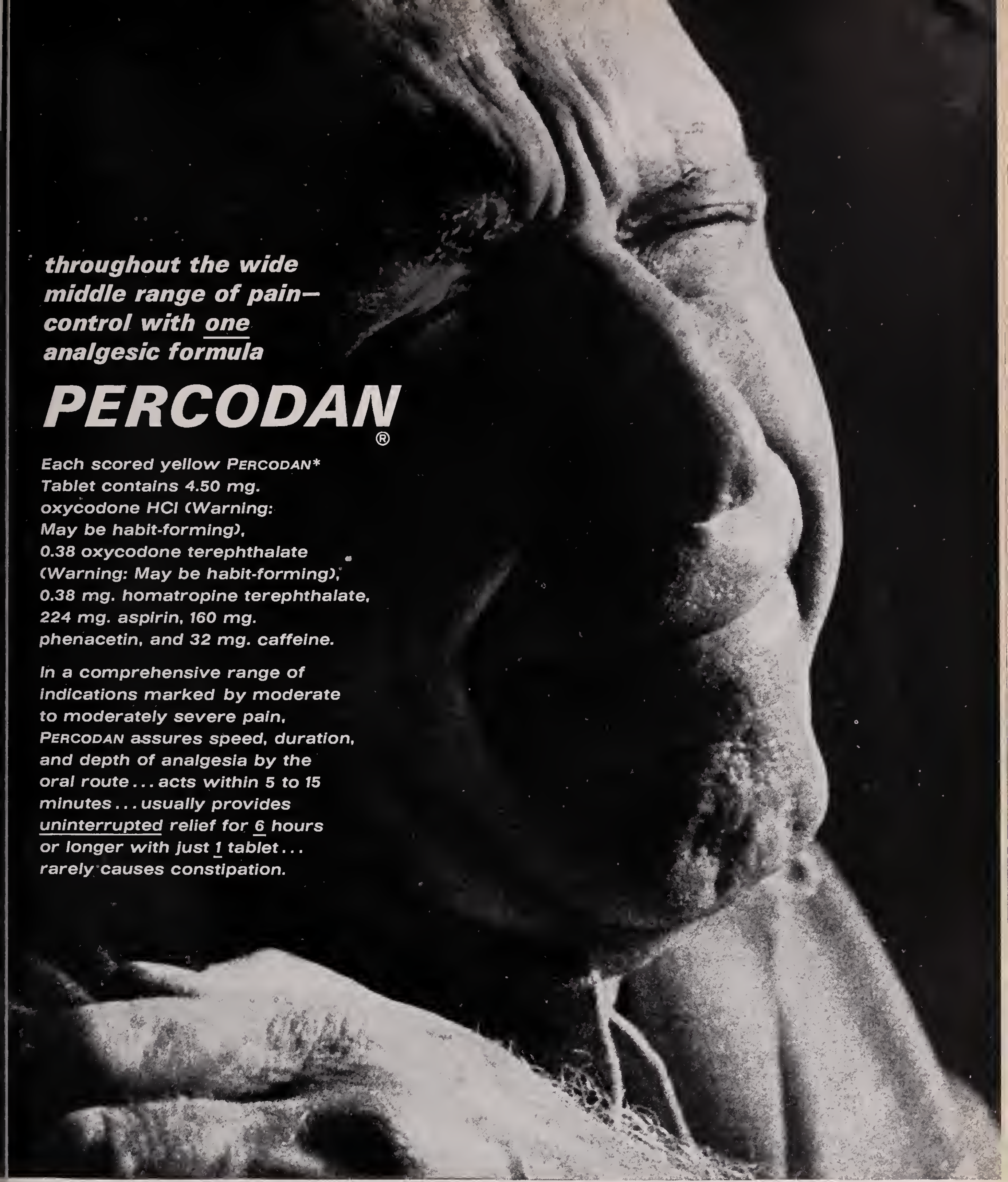
Product of The American Tobacco Company — "Tobacco is our middle name" © A. T. Co.



throughout the wide middle range of pain-control with one analgesic formula

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Each scored yellow PERCODAN Tablet contains 4.50 mg. oxycodone HCl (Warning: May be habit-forming), 0.38 oxycodone terephthalate (Warning: May be habit-forming), 0.38 mg. homatropine terephthalate, 224 mg. aspirin, 160 mg. phenacetin, and 32 mg. caffeine.*

In a comprehensive range of indications marked by moderate to moderately severe pain, PERCODAN assures speed, duration, and depth of analgesia by the oral route . . . acts within 5 to 15 minutes . . . usually provides uninterrupted relief for 6 hours or longer with just 1 tablet . . . rarely causes constipation.

Average Adult Dose—1 tablet every 6 hours. **Precautions, Side Effects and Contraindications**—The habit-forming potentialities of Percodan are somewhat less than those of morphine and somewhat greater than those of codeine. The usual precautions should be observed as with other opiate analgesics. Although generally well tolerated, Percodan may cause nausea, emesis, or constipation in some patients. Percodan should be used with caution in patients with known idiosyncrasies to aspirin or phenacetin, and in those with blood dyscrasias. **Also available:** Percodan®-Demi, containing the complete Percodan formula but with only half the amount of salts of oxycodone and homatropine. Both products are on oral Rx in all states where laws permit. Narcotic order required. **Literature on request.** **ENDO LABORATORIES** Richmond Hill 18, New York

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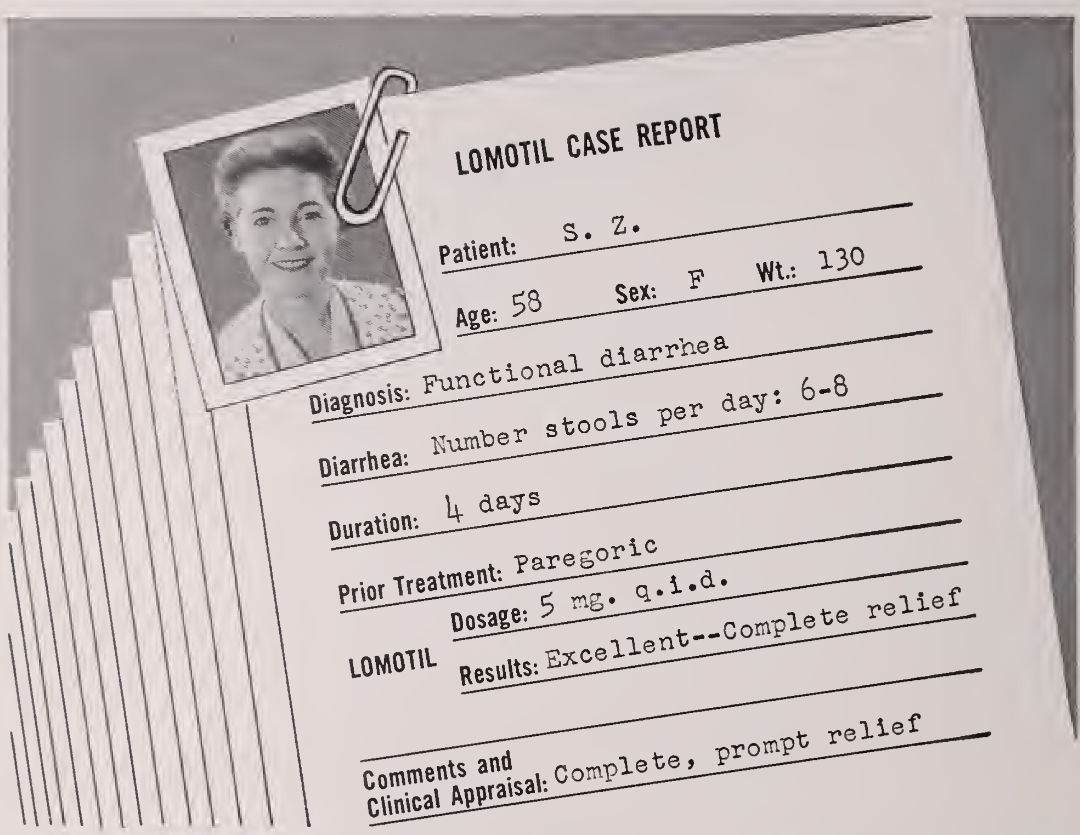
LOMOTIL CASE REPORT

Patient: S. Z.

Age: 58 Sex: F Wt.: 130

Diagnosis: Functional diarrhea

Diarrhea: Number stools per day: 6-8

Duration: 4 days

Prior Treatment: Paregoric

LOMOTIL Dosage: 5 mg. q.i.d.

Results: Excellent--Complete relief

Comments and Clinical Appraisal: Complete, prompt relief

To control diarrhea ...promptly

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Each **tablet** and each 5 cc. of **liquid** contains: 2.5 mg. of diphenoxylate hydrochloride (Warning: may be habit forming) and 0.025 mg. of atropine sulfate

The direct, well-localized activity of Lomotil relieves spasm and cramping and provides prompt symptomatic control of virtually all diarrheas.

Numerous investigators have remarked on the effectiveness of Lomotil in patients with diarrhea uncontrolled by other agents.

Weingarten and his associates[1] found it "an excellent drug . . . efficacious where other drugs have failed. . . ."

Hock[2] obtained "results superior to prior medications in 68.3 per cent of 41 patients."

Since Lomotil controls diarrhea so consistently, it is only rational to prescribe Lomotil *before* other agents have a chance to prove inadequate. To control diarrhea promptly, prescribe Lomotil promptly.

Lomotil is an exempt narcotic, its abuse liability being comparable to that of codeine. Recommended dosages should not be exceeded. Side effects are relatively uncommon but among those reported are gastrointestinal irritation, sedation, dizziness, cutaneous manifestations, restlessness and insomnia. Lomotil should be used with caution in patients with impaired liver function and in patients taking addicting drugs or barbiturates. Lomotil is brand of diphenoxylate hydrochloride with atropine sulfate; the subtherapeutic amount of the latter is added to discourage deliberate overdosage.

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G. D. SEARLE & CO.
Research in the Service of Medicine

Drug Advertising

For some strange reason or, perhaps, for a variety of them, drug advertising is subjected to more criticism and more suspicion than any other form of advertising. Of the four parties concerned, only the advertising agency seems able to see it in proper perspective.

The professional who prepares advertisements knows that what he does is to remind, to stimulate and, to a very limited extent to inform. He knows that advertising seldom produces final decision about using or not using a product and he knows that advertising cannot maintain demand for a product that fails to produce desired results.

The other three parties are the manufacturer, the physician, and the government. Few individuals in these groups seem able to achieve an undistorted view of drug advertising.

Physicians are quite apt to say that they never look at drug advertising yet it has been shown repeatedly that they do. A statement coming much closer to the truth would be that they do not look at advertising that does not interest them. Research indicates that most physicians scan advertising sections in medical journals, rapidly passing those for products of no current interest but stopping to absorb some information from those offering help with a pressing problem.

This is quite understandable. The man who has been having trouble with his automobile will stop at every automobile advertisement in his newspaper but the man who has a satisfactory car, recently purchased, will hardly know that they are on the pages he reads. When one of his cases is not doing well on the product he has been using, the physician will hardly be able to escape the impact of an advertisement about one offering the possibility of better results. Physicians seldom are aware of the source of their first information on new and improved products, or new uses for old ones, but much of it comes from drug advertising. A more realistic attitude toward the advertising pages in medical journals would permit developments making it an even more useful means of transmitting information.

The pharmaceutical manufacturer faces problems peculiar to his industry. He no longer sells prescription ingredients in any quantity. Therefore, he no longer advertises extensively to the pharmaceutical profession. He must advertise to the physician who writes the prescription for his products. He recognizes this situation very well indeed and devotes to advertising a reasonable portion of his budget, in effort to alter prescription writing habits or to maintain those already developed. His distortion is derived from his belief that everyone who receives a journal carrying his advertisement will read the message he knows to be so important. He will deny this statement but present pattern of his purchase of advertising space seems to bear it out.

The fourth party, only recently involved but now dominating the scene through power of law and bureau ruling, is the government. Apparently, those responsible for the new laws, and those charged with writing the regulations under them, believe that physicians behave like marionettes, manipulated by the manufacturer on the strings of his advertising insistence. This is not to be described as a stupid viewpoint but rather one indicating colossel ignorance of the physician's way of doing things.

Drug advertising is neither a time waster, a physician manipulator, nor a miracle worker. It is a useful device, capable of reminding, stimulating or aiding the physician; and it can carry a very limited amount of information. If all four parties concerned could see it for what it is, rather than conjure up images of something it is not, life might be a little less complicated and advertising might be much more useful to all.■

McCarthy and Finland[1] demonstrated that V-Cillin K is well absorbed *even in the presence of food.* No nonabsorbers have ever been found. Thus, whether taken before or after meals, V-Cillin K provides consistently dependable clinical results.

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1. McCarthy, C. G., and Finland, M.: Absorption and Excretion of Four Penicillins, New England J. Med., *263:*315, 1960.

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Postsplenectomy Sepsis

A Review of the Literature and Two New Cases

RODERICK S. COLER, M.D., Kennewick, Washington

The problem of infection subsequent to splenectomy has been an increasingly frequent subject in both surgical and medical journals during the past few years. Two cases are presented here of fulminating septicemia, shock and death, both occurring at about thirteen years of age and seen by the author only five weeks apart. This suggested a relationship between this rather unusual mode of death, in healthy older children, and splenectomy which both had had for trauma two and seven years previously.

review of literature

King and Schumaker, in summarizing 100 splenectomized cases with 5 deaths occurring in the age group under six months (each operated for spherocytosis), felt that there was a relationship between splenectomy in infancy and the occurrence of meningitis or sepsis.[1] Gotstein and Gellis reported the outcome of 107 splenectomies in infants and children performed at Children's Medical Center in Boston over a twenty-four year period. They eliminated from

abstract

COLER, RODERICK S. (811 South Auburn Street, Kennewick, Washington, USA.) Postsplenectomy Sepsis—A Review of the Literature and Two New Cases. Northwest Med 62:865-870 (Nov) 1963.

Two cases of sudden overwhelming pneumococcal septicemia and death in thirteen year old children, splenectomized for traumatic rupture of the spleen seven and two years prior, are presented. Both died in shock with the Waterhouse-Friderichsen syndrome in spite of massive sustaining treatment. A review of literature indicated that serious or fatal infection in post-traumatic splenectomized cases is unusual, possibly due to the older age group involved. Most of the series showed a small but significant incidence of serious and often fatal infection appearing in infants and children splenectomized for an underlying disease. A few long series including all age groups and reasons for splenectomy, failed to show any significant incidence of infection. When infection occurred, it was commonly rapidly overwhelming in spite of energetic treatment and pneumococcus was most frequently found. Other frequently found offenders are also encapsulated. It remains undetermined in fatal cases, what part is played by the underlying disease and what part by the absence of the spleen. The problem may be one of co-factors or there may be random inability to cope with virulent infection due to reduction in volume of the reticuloendothelial system.

abstracto

COLER, RODERICK S. (811 South Auburn Street, Kennewick, Washington, USA.) Postplenectomy Sepsis—A Review of the Literature and Two New Cases. Northwest Med 62:865-870 (Nov) 1963.

Se presentan 2 casos de fulminante y fatal neumococal septicemia en jóvenes de 12 o 13 años de edad. Los 2 habían sido esplenectomizados debido a ruptura traumática 7 y 2 años atrás respectivamente. Los 2 fallecieron con el síndrome de Waterhouse-Friderichsen a pesar de adecuado tratamiento. Revisión de la literatura médica indica que infecciones fatales o serias son raras en esta clase de individuos tal vez debido a la mayor edad del grupo en general. La mayor parte de las series de casos, mostraron un pequeño pero significante aumento en infecciones serias en infantes y niños esplenectomizados por otras causas. Algunas de las series mas grandes incluyendo casos de todas edades y varias razones para la esplenectomía, no mostraron aumento en la incidencia de infección. Cuando sepsis ocurría, era a menudo fulminante, a pesar de enérgica terapia y generalmente debida al neumococo. Otros microorganismos involucrados eran también encapsulados. Queda por ser visto, en los casos fatales que papel juega la ausencia del bazo. El problema puede ser uno de "co-factores" o puede haber reducción de la capacidad para vencer una infeccion virulenta, esto debido a una disminuída masa del sistema reticulo-endothelial.

the series the cases which had had an infection-susceptible disease as reason for splenectomy. Four of this series died from four months to six years after splenectomy, all with pneumococcal infection. They concluded there was no relationship between age at splenectomy and severe sepsis but did feel there was a correlation between the splenectomy and severe sepsis in their cases.[2] In a series of 50 cases of children splenectomized for various reasons, Smith et. al. presented 19 cases of severe and often fulminating infection, six fatal. The two deaths in post-traumatic splenectomized children were from outside their hospital series. They felt that these cases, and others in the literature, suggested more than a random association between splenectomy and susceptibility to infection.[3] Huntley presented 46 cases of splenectomized children, thirteen years old or less, in whom seven developed severe sepsis. She concluded that there was probably a relationship to age at operation (those under one year) and susceptibility to severe infection. She warned extra caution is indicated in performing splenectomy on children with a triad of eczema, thrombocytopenia, and recurrent infection (Aldrich's syndrome). She further felt that splenectomy was hazardous in patients who, as a result of their basic disease, had shown decreased resistance to infection.[4]

Broberger et al. summarized 460 splenectomized infants and children, found 56 cases, (about 12 per cent), to have unusually decreased resistance to infection. Of these, 43 had particularly severe sepsis and 27 died. Of the 56, 23 per cent of those who had their spleen removed before one year of age subsequently developed serious infection and seven died. Of those operated on after one year of age only 10.6 per cent developed severe infection, in spite of the fact that this latter group contained most of the cases splenectomized for a disease predisposing to infection.[5] Horan reported 135 splenectomized children with at least a two year follow-up. There were 17 cases of serious infection, (5 deaths) of which 10 occurred within two years of splenectomy. Of this total, 61 were operated on for traumatic rupture of the spleen, with four serious, nonfatal infections. With a higher incidence of infection in nine children under six months of age than in the older groups, she felt that splenectomy, when not actually life saving, should be deferred beyond the period of infancy.[6] Lucas et al. concluded from their review of 74 cases splenectomized for idiopathic thrombocytopenic purpura, spherocytosis or rupture, that there was only a slight but real increase in susceptibility to infections in splenectomized patients. They had three deaths, all pneumococcal, none in patients splenectomized for rupture.[7] Reemtsma and Elliott believed from their review that splenectomy in infants and children performed for serious hematological disorder, was followed by an increased incidence of severe bacterial infection for about the first three years postsplenectomy as compared with normal individuals.[8] Burman reported on pooled data of cases of infection in the first year of life, after splenectomy for hereditary spherocytosis. Infection developed in 10 of 48 patients and four died.[9]

Numerous individual cases of septic death following splenectomy have been reported in the literature. Hofnegal reported two postsplenectomy deaths, one with septicemia and the Waterhouse-Friderichsen syndrome, and the other with streptococcal meningitis and tracheitis. The latter case, splenectomized at age four for idiopathic thrombocytopenic purpura, died at age six and was found at autopsy to have an accessory spleen.[10]

Maxwell Finland, in his commentary on the previous literature, summarized as follows: "There is probably good basis for the conclusion that children operated on under one year of age are more susceptible to serious infection than those operated upon later. There is certainly little doubt that when infection occurs in splenectomized children it is frequently severe, frequently rapidly progressive, a good many are pneumococcal, and a comparatively large number are fatal."[11]

opposing viewpoint

On the other hand, the literature is replete with long series of reports indicating few or no infectious sequelae after splenectomy. Rousselot and Illyne reported 17 cases of splenectomy for traumatic rupture showing no predisposition to infection.[12] Miller and Hagedorn, in a follow-up study of 140 consective splenectomies of all ages and all reasons, found no significant infectious sequelae.[13] Walters and Chaffin, in presenting 37 cases of which 10 were splenectomized at less than seven months of age with follow-ups from ten months to thirteen years, found no serious infections.[14] Doan et al. found only three severe infections in 87 splenectomized children.[15] Boley and McKinnon et al. reported 33 cases, ages two to fifteen, all splenectomized for traumatic rupture of the spleen. All spleens were found to be uninvolved with other diseases and a follow-up study on 26 showed no episodes of severe infection. They concluded that splenectomy does not increase the susceptibility to future infection in normal children. They felt since most of the cases in the previous literature had been splenectomized for a pre-existing hematological disease, the possibility existed that susceptibility to infection was related to combination of the primary disease and removal of the spleen.[16-17] Laski and MacMillian, reviewing the infection rate in 81 cases of splenectomy compared with 94 cases of appendectomy, found one child in each group with purulent meningitis.[18] Later analysis of this report by Smith and Greenberg pointed out that five of the splenectomized children had later died compared to no deaths in the appendectomy group.[19]

Robinson and Sturgeon in summarizing their own cases plus those of three other authors, analyzed 110 splenectomized children followed for a median period of six years. They divided this series into two groups. "Group I" (63 cases only 1 of whom had severe infection) consisted of those splenectomized for a disease not predisposing to infection: spherocytic anemia, idiopathic thrombocytopenic purpura and traumatic rupture. "Group II" (47 cases) was made up of cases splenectomized for disease which predisposed to infection: Cooley's anemia, acquired hemolytic anemia, portal hypertension, hypoplastic anemia, malignant tumors, and reticuloendotheleosis. They found in the latter group an incidence of severe postoperative infection in 25 per cent. There was no relationship of infection to age at time of splenectomy. In 10 of 12, infections occurred within two years of operation. There were 32 cases operated upon for ruptured spleen and no infections occurred in this category. They concluded that splenectomy, when done over the age of six months for Group I reasons, carried a low risk of post-operative infection.[20]

CASE REPORTS

Case 1. A girl, white, age twelve and a half years, was seen in the emergency room in April 1961, deeply cyanotic, somnolent and in shock. She had undergone splenectomy for ruptured spleen following a bicycle accident in April 1959. Past history included measles, mumps, chicken pox, and tonsillectomy-adenoidectomy. There had been no occurrence of bacterial infection before or since splenectomy except for a strep throat, immediately following splenectomy, responding easily to antibiotics. She had had an uncomplicated dental extraction three weeks prior to the final admission. On the day preceding admission she had been well and active, and there was no recent history of upper respiratory infection or other illness. The evening before admission she had complained of slight malaise, aching in the legs, arms, and left flank. The next morning she was found somnolent, faint on ambulation and complaining of great thirst. A half hour before admission she became semi-comatose, deeply cyanotic and had an incontinent stool. In the hospital she could be aroused enough to deny headache or other pain. Examination showed blood pressure of 50/0, pulse 170, mild hyperpnea, cool, dry, cyanotic skin, and rectal temperature of 104 F. EENT examination showed no site of infection, and the recent extraction site was healing well. Lungs were clear; heart tones were of good quality; and there was no abdominal tenderness, palpable organ, stiff neck or papilledema. Blood pressure at first responded to levarterenol. Blood was drawn, and lumbar puncture performed. Massive intravenous antibiotic therapy consisting of penicillin, chloramphenicol and sulfisoxazole was instituted. As levarterenol failed, large doses of four corticoids were given. Mottled cyanosis increased and petechiae appeared over the back. She became increasingly restless, dyspneic, rales appeared, and in spite of special cooling procedures, the temperature rose to 105 F, rectal. She died seven hours after admission, twenty-eight hours after onset. The spinal fluid, under normal pressure, was clear; and there was no growth on culture. The blood culture grew pneumococcus which was also seen in blood smear. The nasopharyngeal culture grew *Staphylococcus aureus.* On admission the blood glucose was 77, bun 22, Hgb 13.4, wbc 2,850—polys 48, staff cells 12, eos 2, and lymphs 38. A chest x-ray on admission was normal.

At autopsy the skin over the entire body in the embalmed state had a deeply mottled cyanosis with a few petechiae present over the back. Lymphnodes were slightly palpable in the cervical chain. Splenectomy scar was present. There was more than a moderate amount of peritoneal and pleural fluid. Both lungs were similar, being firm and dark pink without exudate on the pleural surface. Fluid exuded from all areas but there was no consolidation. Hemmorrhages were present in both ovaries. The adrenals were large and so hemorrhagic that only bits of yellow cortex were visible. The spleen was absent and an accessory spleen, 3 cm in diameter, was adherent to the tail of the pancreas. Mediastinal and aortic nodes were enlarged. Microscopically the lungs showed no pneumonia but extreme congestion. Sections from the accessory spleen had well preserved and well demarcated, though widely separated, Malpighian corpuscles. These contained small lymphocytes which appeared normal. Splenic sinuses had some degree of fibrosis and little or no blood was found in them except near the capsule. There were no acute inflammatory cells. Various sections of lymphnodes were similar, showing germinal centers, none of which appeared to be active. In a few of these the lymphocytes appeared to be depleted and some larger cells were present. The medullae and particularly the sinuses were depleted of most cellular elements. The thymus was similar. All sections of adrenal glands were similar, showing almost complete replacement by blood. In the areas of remaining adrenal tissue, the cortical cells were well preserved and had the usual lipoid content. The brain was not examined.

Case 2. A boy, white, age thirteen years, was brought to the hospital in a semi-comatose state in May 1961. Splenectomy had been performed in 1954 at age six, following a 22 caliber bullet wound penetration of chest, liver, and spleen. He had made a good recovery and had suffered no sequelae. Only previous childhood illness had been measles, and there had been no postsplenectomy bacterial infection. On the day preceding admission he had been swimming in very cold water but had no complaints and had appeared well. On the day of admission, on arising, he complained of weakness and nausea but denied headache, sore throat, cough or abdominal pain. A single chill was followed by feverishness, collapse and an incontinent stool. Examination showed a well developed, semi-comatose, disoriented boy with mottled cyanosis. Blood pressure was 60/30, pulse 180, and temperature 105.8 F, rectal. Skin was cool and dry. Neck was flexible, funduscopic exam normal. Tonsils were present but not inflammed, and there were no palpable nodes. Lungs were clear and heart tones of good quality. Respirations were shallow and rapid. Abdominal examination was normal. With a splenectomy scar quite apparent and the previous case fresh in mind, no time was lost in drawing blood, starting oxygen and four fluids with massive amounts of penicillin, chloramphenicol, sulfisoxazole, steriods and levarterenol. His blood pressure failed to respond; and he died five hours after admission, fourteen hours after onset of symptoms. Admitting wbc was 2,200, polys 35 (80 per cent distorted), staff cells 5, lymphs 55 and disintegrated 5. Hgb was 15.1. Early, the total circulating eosinophile count was 44, possibly indicating significant corticoid output at that time. Total protein was 6.28, albumin 4.4, and globulin 1.88. A spinal tap was not done. Blood cultures grew pneumococcus.

Post-embalmed autopsy revealed generalized purpuric lesions greatly accentuated in all areas of scar tissue, especially the acne lesions over the face. Lungs were diffusely congested and flame hemorrhages were disseminated through the endocardium. Thymus was enlarged and contained disseminated petechiae. Cervical and mediastinal lymph nodes were slightly enlarged. There was acute, diffuse, bilateral adrenal hemorrhage and the spleen was absent. A small accessory spleen was present and mesenteric lymph nodes were enlarged. There were disseminated gastric mucosal petechiae. No pathological changes were found in the brain. Microscopically lymph nodes showed acute inflammatory reaction with leukocytic infiltration and a few acute hemorrhagic foci. Lung tissue showed only generalized hyperemia. Bone marrow and accessory spleen revealed only hyperemia. A review of the old surgical chart showed that the spleen had been microscopically normal.

discussion

Reports of overwhelming infection and death in *post-traumatic* splenectomy cases have been very few in the literature, and the concensus would indicate that any unusual infection in this group would be rare at any age. On the other hand, the two cases presented here, overwhelmed and with seemingly little or no resistance, make one wonder about the relationship to splenectomy. In series from the literature, most followups were very short. One of Smith's cases developed severe infection sixteen years after operation. The possibility exists that longer followups would produce a higher incidence of severe infection. Nevertheless, at present no positive relationship may be derived from the literature between the post-traumatic group and the incidence of sepsis.

Hofnagel[10] reported the finding of an accessory spleen at autopsy in a four year old splenectomized for idiopathic thrombocytopenic purpura. The two cases presented here, both dying with accessory spleens, would suggest the presence of hypertrophied accessory spleen does not protect, and therefore its presence probably does not account for the varied incidence of infective resistance and susceptibility in postsplenectomy series. Again, there are available too few reports of patients with accessory spleens to permit more than conjecture on this point.

The importance of the spleen in resistance to infection has been established. In addition to its great volume of lymphocytes, important to antibody formation, natural and acquired resistance to bacterial infection is related to its macrophage system. Some authors, convinced of an increased susceptibility to infection, have listed the following possible reasons: decreased antibody level or response; lack of previous contact with these organisms, (which may account for resistance in the older age groups); route of entry; virulence; concentration of the invading organism; and the possibility of splenic factors not now known which alone may be of little importance, but in combination with other factors may decide the course.

A wide variety of bacteria have been recovered in postsplenectomy infections. The most common ones causing septicemia have been pneumococcus, meningococcus and *Hemophilus influenzae*. A previous author has called attention to the fact that these three are encapsulated, and has suggested that this factor may be significant in postsplenectomy septicemia. In overwhelmed cases, pneumococcus has by far been the most common organism recovered. A large percentage of cases in the literature dying from septicemia have had the Waterhouse-Fridcrichsen syndrome, as did the two presented here. (This well-known syndrome may be associated not only with meningococcus, but with pneumococcus, streptococcus, staphlycoccus and *Hemophilus influenzae).* Besides septicemia, other types of severe infection found in postsplenectomy children have been meningitis, pneumonia, and carditis.

Several authors studied gamma globulin levels in some of their cases both well and sick, and no significant variation from normal controls was found. Administering gamma globulin did not alter the infective course in those few cases in which this was tried. From the studies done to date the serum protein and antibody concentrations in splenectomized children are apparently similar to those of normal children.[2,3,8] In suckling rats, Rothberg and Corrallo reported no difference in susceptibility to infection by a highly virulent strain of pneumococcus, between the normal and splenectomized animals.[21] Saslow et al.,[22] in a most interesting study on antibody response in splenectomized persons, found that the absence of the spleen did not effect antibody response in 87.6 per cent of 105 previously splenectomized patients immunized with tularemia vaccine. One group received one subcutaneous injection and a second group, three successive injections. These two groups were compared with each other and with normal controls. These patients had a variety of underlying disorders for which splenectomy had been done. When patients with chronic lymphatic leukemia (known to be poor antibody formers) were excluded, only 5.5 per cent of the group receiving three successive injections of vaccine failed to exhibit an antibody response. Of the single-vaccine-injection group, 16.6 per cent failed to respond. The age range for the two groups was eighteen to forty years. About 12 per cent of the combined splenectomized groups failed to show an antibody response after one or three injections. Of the six splenectomized for traumatic rupture none failed to show an antibody response. There was no correlation between the serum protein electrophoretic pattern and the antibody response in either splenectomized or normal cases. From the above it was suggested that the antigenic dose may influence the antibody response in splenectomized patients, and this could be one of the factors in explaining the sporadic occurrence of infection. Since all six who had had splenectomy for traumatic rupture of the spleen formed antibodies, the author concluded that the failure to exhibit antibodies in the other cases was due to the underlying disease rather than absence of spleen. Although this work in antibody response could offer a partial explanation regarding the lack of resistance in splenectomized cases with underlying disease, it would seem to rule out this factor in cases splenectomized for trauma. Statistically it seems there is no problem in post-traumatic series, sporadic cases may simply represent random inability to filter adequately and destroy bloodborn bacteria when a potent strain gains entrance to the body, due to marked reduction in volume of reticuloendothelial system.

Smith et al., in a more recent report, emphasizes again the special danger to the infant splenectomized for underlying disease. They suggest that the relation of age to susceptibility of infection "may be the slowness with which the immunologic mechanisms of the spleen are assumed by other organs after splenectomy in the child as compared with the adult, in whom this shift has already been established." The literature would indicate that the presence of an underlying, infection-predisposing disease is certainly important, and of course longer followups well into the teens, might show more cases in any series.[23]

For those whom the literature has convinced of a problem, especially in the infant and younger child, Smith[23] suggests that prophylactic antibiotics (tetracycline 250 mg or penicillin orally 200,000 units daily) be given for two years postsplenectomy. In the older age groups without underlying disease where the literature does not convince that a significant problem exists, it is still probably important to keep the threat in mind and treat early and vigorously any infection, no matter how mild it may seem.

It seems clear that no overall statement can be made concerning splenectomy and an increased susceptibility to infection. It would seem that a small but significant threat appears for several years after splenectomy performed in the infant with underlying disease. The two cases presented here, dying similarly to those in the most susceptible group, might be of some significance as they have occurred in the category previously thought least susceptible, that is, the older child splenectomized for trauma.

summary

The question of an increased incidence of serious infection after splenectomy in infants and children has received much attention with great diversity of opinion in the past few years. The significant point would appear to be that when infection occurs it is occasionally fulminating and fatal in spite of energetic treatment. Pneumococcus has been most frequently found to be the etiological agent.

Two cases are presented. A twelve year old girl splenectomized for trauma two years prior, and a thirteen year old boy splenectomized for trauma seven years prior, to their fatal sepsis. Both were hospitalized in shock dying fourteen and twenty-eight hours after onset of mild symptoms, in spite of massive sustaining efforts. Both had blood culture growth of pneumococcus and suppressed leukocyte counts. Autopsies were similar in that both had large accessory spleens, Waterhouse-Friderichsen syndrome, and no apparent site of primary infection.

A review of the literature indicates that in those series of cases where a significant incidence of postsplenectomy sepsis occurred, the threat was most commonly related to the infant age group splenectomized for an underlying disease. Under other conditions and in the older child the question of an increased susceptibility to infection after splenectomy is quite unsettled.■

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A Comparative Clinical Test of Pholcodine with Codeine as Control

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Quantitatively the pediatrician is more concerned with symptoms associated with upper respiratory infections than with symptoms of any other condition. Not the least of these is cough.

As Banyai has noted, cough has many serious sequelae, including pulmonary and subjunctival hemorrhage, marked dyspnea, right ventricular strain, tussive syncope, interstitial emphysema, and spontaneous pneumothorax.[1] In the ordinary case, however, the results are not as severe as most of those he lists. Nonetheless, there are at least two good reasons why the unproductive cough should be suppressed entirely, and the productive cough reduced to the minimum required for effective expulsion of bronchial mucus.

First, cough interferes radically with the young patient's badly needed rest and sleep, and at times even with ingestion and retention of food, hence retarding recovery. Second, cough is a material factor in spreading infection, especially where siblings are present. Recent epidemiologic studies have shown that the large incidence of upper respiratory infections among children in particular, is due to cross-infection, and cough is probably the chief culprit.[2-4]

Opium derivatives, particularly codeine and dihydrocodeinone, have generally been considered the drugs most useful in cough suppression. While the addictive potential of dihydrocodeinone in particular has at times caused parents concern over use of these drugs, the amounts employed in therapy of acute cough, or of acute phases of a chronic cough, are scarcely sufficient to make this an actual peril. The commonly employed opium derivatives do, however, cause mild constipation in about a third of the patients to whom they are administered.

Recent literature has suggested that an antitussive agent favored in Britain, pholcodine, is at least as efficacious in suppressing cough as

abstract

KELLY, DONALD F. (10535 N.E. Glisan Street, Portland, Oregon, USA.) Comparative Clinical Test of Pholcodine with Codeine as Control. Northwest Med 62:871-874 (Nov) 1963.

A comparative single-blind study of a new antitussive agent, pholcodine, was undertaken among pediatric patients with acute cough, using codeine as control.

Both codeine and pholcodine resulted in effective cough suppression to the extent desired in more than 90 per cent of the patients under study. The average duration of antitussive effect, however, was about four hours for pholcodine, as against three hours for codeine.

About a third of the patients receiving codeine experienced mild constipation. There were no side effects attributable to pholcodine.

Since all patients had acute cough and were on medication for less than a week, addictive liability was not a significant factor and nothing could be adduced about it. Cited literature suggests, however, that the drug under study may be devoid of such liability.

abstracto

KELLY, DONALD F. (10535 N.E. Glisan Street, Portland, Oregon, USA.) Comparative Clinical Test of Pholcodine with Codeine as Control. Northwest Med 62:871-874 (Nov) 1963.

Un estudio se llevó a cabo comparando la eficacia de un nuevo antitusivo, pholcodine, en niños con tos de poca duración, usando codeína como control.

Tanto codeína como pholcodine efectivamente suprimieron la tos en más del 90 por ciento de los pacientes. La duración del efecto fué alrededor de 4 horas con pholcodine y 3 horas con codeína.

Cerca de un tercio del total de los pacientes recibiendo codeína sufrieron leve estreñimiento. No se observaron efectos adversos debido a pholcodine.

Puesto que estos pacientes tomaron el medicamento por menos de una semana, no conclusiones se sacan acerca de los poderes adictivos. Sin embargo la literatura médica citada sugiere que la pholcodine no causa adicción.

dihydrocodeinone, without the gastrointestinal side effects.[5-7] Pholcodine is also an opium derivative. It is suggested in a recent World Health Organization report, however, that some morphine-like preparations may not have the same addictive potential as morphine, and recent studies indicate that pholcodine may be such a preparation.[5,8,9] An earlier World Health Organization report defined pholcodine specifically as a drug which is in itself non-addictive, and one less liable to conversion to an addiction producing drug than is codeine.[10] Though the issue is physiologically insignificant in the ordinary acute cough episode, absence of addictive liability is a significant factor where long-term therapy for chronic cough is required.

A pilot study of pholcodine among 25 pediatric patients with acute cough resulted in complete or marked suppression in 19 cases and some suppression in the other six cases thereby indicating considerable antitussive efficacy on the part of the new agent.

controlled study

Following the pilot study, a comparative clinical test of pholcodine was initiated with codeine as control. Both agents were supplied in a syrup vehicle containing glycerine, water and 8-10 per cent alcohol, with invert sugar and a banana flavoring agent. Each teaspoonful of the syrup contained, respectively, 5 mg of pholcodine or 8 mg of codeine.

Twenty-seven children received pholcodine* and 26 children received the active control preparation. All had acute cough, with upper respiratory infections as the underlying cause in every case but one. The two groups were matched as closely as possible regarding age, diagnosis, nature and duration of cough. These are presented for both groups in table 1. Eight patients were involved in both groups on a cross-over basis.

All patients were seen in the office initially and on alternate days during the approximately five days of therapy. The patients were given the medication for administration at home according to prescribed dosages. Pholcodine and codeine were alternated among the patients to the extent that this was consistent with matching requirements. In the eight cases of cross-over, patients were given the two agents alternately to administer at home. Parents were not informed that there was a change of medication.

Table 1

Patients in Comparative Study

	Codeine (8 mg. per tsp.)	Pholcodine (5 mg. per tsp.)
Total Patients*	26	27
Age: Range	8 mo. to 17 years	8 mo. to 15 years
Average	5.5	4.5
Sex	17 M; 9 F	15 M; 12 F
Diagnoses		
Bronchitis	16	15
URI	6	6
Pneumonia	3	3
Influenza	1	—
Post-Nasal Drip	—	2
Measles	—	1
Concurrent Therapy		
Tetracycline	14	12
Penicillin	3	5
Chloramphenicol	—	3
Nose Gtts.	2	4
None	7	3
Cough Description		
Moderate	23	23
Severe	3	4
Productive	16	19
Unproductive	10	8
Cough Duration—Pre-Treatment		
Range	2 to 10 days	2 to 14 days
Average	5.1 days	5.6 days

*Eight patients were crossed over from one medication to the other, hence are included in both totals.

In the main, dosages were one teaspoonful four times a day for patients with productive coughs and two teaspoonfuls four times a day for patients with unproductive coughs, the aim of therapy being to suppress the unproductive coughs altogether and the productive coughs sufficiently to eliminate disturbance of rest and sleep. In a few cases of very young children, however, only one teaspoonful was given, even for unproductive cough; and in a few cases of very severe productive coughs two teaspoonfuls were administered. All cases of bronchitis were accompanied by productive cough, and all other cases were accompanied by unproductive cough.

Parents of all patients were asked to keep careful records of antitussive effect of the medication they were administering, including duration and side effects. Their observations were transmitted to the investigator during the office visits on alternate days. In evaluating the medication the extent of antitussive effect in productive and unproductive cough was considered separately. For productive cough, the medication was evaluated as excellent, where cough suppression was almost complete, sufficient to eliminate all disturbance of rest or sleep; good,

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*Supplied as Ethnine Simplex by The Purdue Frederick Company, New York, N.Y.

Table 2

Results of Comparative Study of Pholcodine, with Codeine as Control

	All Patients		Eight Cross-over Patients	
	Codeine (8 mg. per tsp.)	Pholcodine (5 mg. per tsp.)	Codeine	Pholcodine
*Antitussive Effect**				
Excellent	22	22	6	7
Good	2	3	2	1
Fair	2	1	—	—
Ave. Duration of Antitussive Effect	3 hours	4 hours	3 hours	4 hours
Ave. Duration of Therapy	5 days	4.5 days	5.8 days	5.8 days
Dosages:				
1 tsp. q. i. d.	16	16	7	7
2 tsp. q. i. d.	9	11	1	1
3 tsp. q. i. d.	1	—	—	—
Side Effects				
Moderate constipation	8	—	3	—
Vomiting	—	1*	—	—
None	18	26	5	8

*One patient on pholcodine, an extremely nervous 10 year old girl with influenza who had just lost her mother, vomited when administered the first dose of the medication. Medication was immediately discontinued because of her nervous condition, and the case was eliminated from the evaluation, though noted under side effects.

where there was substantial cough suppression, sufficient to eliminate much of the disturbance to rest and sleep; fair, where there was some cough suppression but disturbance of rest and sleep continued; and poor, where there was no suppression. For unproductive cough the medication was evaluated essentially the same way expect that it was rated as excellent only where there was complete suppression of cough.

results

For the entire series, the results as regards efficacy in suppressing cough to the extent desired were fairly similar for both agents (Table 2). In 22 of the 26 patients receiving codeine, there was excellent suppression; in two cases the effect was good and in two other cases there was only slight effect. In 22 of 27 patients receiving pholcodine, there also was excellent suppression; in three cases the effect was good; and in one case there was only slight effect. There was one patient on pholcodine who had to be eliminated from evaluation of results, an extremely nervous ten-year old girl with influenza who had recently lost her mother and who vomited on first administration of pholcodine. Medication was discontinued in her case as a result of her extremely nervous condition. Hence for both agents 85 per cent of the patients evaluated had excellent results; for pholcodine, 11 per cent had good results; and for codeine, 8 per cent had good results.

In two respects, however, pholcodine proved superior to codeine. Reports of the duration of cough suppression consistently indicated an effective period of approximately four hours for pholcodine as against three hours for codeine. And whereas there were no side effects directly attributable to pholcodine, 8 of the 26 patients who received codeine complained of mild constipation.

Among the eight cross-over patients, the relative results were similar to those in the entire series (Table 2). There was no significant difference in efficacy, except that duration of effect was greater with pholcodine in five of the eight patients and in one patient the mother felt that the control drug was more effective. In two cases, no difference was observed. There were complaints of mild constipation in three patients following administration of codeine and none following administration of pholcodine. The average duration of antitussive effect in these eight patients was the same as in the total series for both drugs.

comment

From the results of this study, there appeared to be little doubt that pholcodine was effective as a cough suppressant, with a duration of effect about 30 per cent greater than that of codeine. It might be noted here that animal studies comparing the antitussive properties of the two drugs likewise suggested a greater duration of effect for pholcodine, though the difference was about 50 per cent.[11] This disparity in results is somewhat greater by virtue of the fact that in the animal studies equal doses of drugs were given, whereas in this study the amount of codeine employed, customary in cough medication for children, was 60 per cent more than pholcodine. This disparity may be accounted for, however, by the fact that doses of both drugs administered to animals were far higher than used here and it was noted that a diminution of dose lessened the difference in effect between the two drugs. The significant fact of course is that in both studies pholcodine and codeine were effective as cough suppressants, with pholcodine having the greater duration of effect.

From this study, there also appeared to be little doubt that pholcodine administration did not produce the mild constipation customarily encountered in a substantial proportion of patients using codeine. Nothing, of course, could be deduced regarding addictive liability since both medications were employed in small quantities, for less than a week.

Because of its efficacy, lack of side effects and ease of administration, pholcodine appeared, in this study, to be superior to other antitussives I have employed in pediatric practice.■

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Psychological Study of Colloquial Menstrual Expressions

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In many cultures the occasion of a girl's first menses, her menarche, has a public significance to the immediate community. Reaction to menarche may vary from an elaborate announcement feast, as among the Nootka Indians of the north Pacific Coast, to the secretive separation of the pubescent girl in a single menstrual hut in other tribes. Writing on the Northwest Indians, Goddard[1] described their social and ceremonial recognition of this physiological milestone. At menarche the girl was secluded, restricted for a period as to her diet and movements, and required to observe special taboos. The Papago Indians, according to Underhill[2], believed that with menstruation a girl automatically became the vehicle of a terrific force, and the emphasis in the succeeding ceremony was on controlling the force. The mysterious power which descended periodically upon the woman was thought to be entirely incompatible with the life and activities of men. For the sake of the community, therefore, she must be segregated whenever this magic came upon her. Older women were appointed to instruct the girl having her first menstruation, which was considered especially malignant.

Anthropologists speculate that two basic beliefs were responsible for such cultural regulations: (1) What happened at menarche affected the girl throughout her life, and (2) the girl's actions at this time had a greater effect on other persons and on the welfare of the community. The taboos and restrictions undoubtedly served to frighten the girl into obedience to the group.

Special words and expressions as well as verbal taboos are used in most cultures to refer to menstruation. Frequently these expressions are synonymous with "danger," "unclean," or "beware." In a few cultures, menstrual words are used only by women and are taught only at the rites attendant on menarche.

present terminology

In our society, physicians are taught to use the terms "catamenia," "menses," and "menstruation." In health education a consistent attempt is made to use the correct terms of "menstrual" or "monthly" period. Since high school (and even some college) textbooks on human physiology consistently omit any chapter on reproduction, menstrual terminology is taught verbally for the most part. The few available audio-visual tools all too frequently are used at a grade level beyond the menarcheal age of today's pubescent girl.

While a number of psychoanalytically-oriented physicians have written on the meaning and interpretation of attitudes of patients toward their menses, a search of the literature reveals surprisingly little information on the actual or functional vocabulary used by women in the general population. Twenty-five years ago Louise Brush[3] obtained a menstrual vocabulary of 100 college girls and McHugh and Wasser[4] published a study in 1959 on attitudes of college women toward menstruation, using the Thurston-Chave Attitude Rating Scale.

The present study is part of a series, "Attitudes Toward Menstruation." Also included in the series are: "Age at Menarche," "Sources of Menstrual Information," "Reactions to Menarche," and "Attitudes Toward Menopause." Some of these studies compared responses of high school and college men with those of their corresponding feminine age mates.

In the study reported here, the menstrual vocabulary was used as an index of the individual's attitude. Anonymous questionnaires included the question "What is your way of saying it to others?" The 781 respondents were girls and women residing in the Puget Sound area, having predominantly middle class background, and varying in age from 14 to 87 years. They gave a total of 1,031 responses. The occupational and source groups included students in three coeducational colleges, graduate nurses and attendants at a state psychiatric hospital, student nurses from six affiliating schools of nursing, social service workers, clerical workers, other working women, and women from church groups, adult education classes, and senior citizen clubs. For comparison purposes, we grouped the women by age into teenagers—below 20 years, middle—20 to 40, and oldest—over 40.

Their words and phrases differ in kind and quantity from those heard in the physician's office and the health education classroom. The 1,031 responses were sorted into eight categories which were then used to compare the responses by the three age groups. The latter could be said to represent three different generations. Statistical analysis of these data indicated that the differences in response by age group were significant at the .001 level.

Technical terms, such as "menstruation," were used by only 4 per cent of the teenagers, as

abstract

LARSEN, V. L. (Fort Steilacoom, Washington, USA.) Psychological Study of Colloquial Menstrual Expressions. Northwest Med 62:874-877 (Nov) 1963.

A search of the literature reveals little information on the actual vocabulary used by women in referring to their common experience of menstruation. This study specifies and analyzes the actual expressions and implied attitudes given by 781 girls and women of middle class background in the Puget Sound area. Comparisons between the three age categories are also shown. We on the health team need to know the range of menstrual vocabulary used by today's women in order to increase our understanding of patients' attitudes.

abstracto

LARSEN, V. L. (Fort Steilacoom, Washington, USA.) Psychological Study of Colloquial Menstrual Expressions. Northwest Med 62:874-877 (Nov) 1963.

La literatura médica contiene relativemente poco en lo que se refiere a los términos usados por mujeres en general para describir la menstruación. Este estudio analiza las expresiones y actitudes implícitas de 781 muchachas y señoras de la clase media de esta localidad. Comparaciones se esteblecen entre 3 grupos por edades. Es importante saber el vocabulario "menstrual" en voga para mejor entender las actitudes de nuestros pacientes.

Table 1

Menstrual Expressions

Medical terminology
Menstruation; menstrual
Menses
Catamenia
Cyclic reference
Period
Monthlies
M.P.
Casual
That time
Those days
It started
It has happened
Mother Nature
Nature's way
You know how it goes
Here we go again
The usual
Human nature
Reference to a time of sickness
Coming sick
Sick time
Unwell
(Am having) cramps
Don't feel well
Reference to a visitor, friend or relative
Grandma is here
Grandma has come to visit
Granny; Grandma
(I have a) Visitor
I have my little friend; Friend
Redheaded cousin from the South
Country cousin
Grandma fell off the roof
Grandma fell over the cliff
Aunt Martha (Susie) is here
Somebody visited me
Cousin Red is visiting
Messenger
She's here again
Redheaded Grandma
Company
Redheaded friend
Ricky
Minnie
Leaky Lena
Lucy came
References to mechanics
Wearing the rag
Riding a white horse
Back in the saddle again
I'm on the horse
Riding the rag
Reference to an attack or attacker
The enemy has attacked
The M.P.'s caught me
Little red devils came knocking at my door
The Plague
Doomsday is here
The phantom strikes again
The bloodies are upon me
I'm hit
Negative Feelings
Wrong time of the month
Nancy troubles
Little girls' complaint
It's my unhappy birthday
Monthly troubles
Inconvenient at this time
I'm indisposed
Damned menstruation
Careful time
Under the weather
Miscellaneous expressions
Guess I'm not pregnant this month
Cloudy weather
All of a sudden it started to rain
Sprung a leak
I'm on the horse
Merry Christmas
G-Day
Celebrating
Fire engine
I circled the calendar
Red letter day
My belly burped
The Pip
Safe again
Rat trap
Cotton candy bars
Tomato aspic
Having babies
White cylinder week
Defrosting
Bunnies
The red flag is up
This is my day
Coming around
Fell off the roof
Additional expressions of college men
Storm warning
Wearing the laundry
Tides in
Tides out
Out for the present
Can't go swimming
She has her days
A time of tired feeling
She is packing
Cotton pulling
Priming the dick
Like dropping tires
Shy on dates or cold
Sinful to talk about it
Can't understand it
Period when she can get pregnant
Sperm cells come down in her

compared with 15 per cent in the middle group and 18 per cent in the over-40.

Simpler terms indicating the cyclic character of the process, such as "monthly" or "period," were by far the most frequently used by all three age groups. The frequency ranged from 50 per cent by the teenagers to a low of 27 per cent by the oldest group.

Expressions which could be described as indifferent or casual include "that time," "it has happened," "Mother Nature," "the usual," and "here we go again." These were given by 10 per cent of the teenagers, 8 per cent of the middle group and 45 per cent of the oldest group.

Phrases equating menstruation with sickness, bodily injury, and personal attack were given by 3 per cent of the teenagers and by 9 per cent of those over 40. Early psychoanalytic observations[5] pointed out that some women connect menstruation with the idea of mutilation. Such phrases included "coming sick," "sick time," "cramps," "the enemy has attacked," "the M.P.'s have caught me," "the plague," and "the phantom strikes again." Parenthetically, one wonders whether the "M.P.'s" refer to military police, since this was used by someone living adjacent to a military installation, or to menstrual period.

The time-honored description of menstruation as "the curse" was used by 4 per cent of the teenagers, 7 per cent of the middle group, and 15 per cent of the oldest group. Occasionally it was called "hell week" and "doomsday."

Expressions relating to the personal mechanics and restrictions involved in coping with the flow were given by 11 per cent of the teenagers, 9 per cent of the middle group, and 16 per cent of the oldest group. Perhaps many of the oldest group tend to react in terms of the mechanical hazards and inconvenience of the oldtime "home remedies," one's "personal rags." This group of expressions included "off the floor" (gym), "back in the saddle," "riding a white horse," and the new phrase "white cylinder week."

Reference to the menstrual period as a "messenger," "visiting friend," or a female relative offered a surprising finding. Such a visitor was given a specific name, such as Nancy, Lena, or Lucy or was occasionally described in such detail as "my red-headed cousin from the South." Although these mention the visitor as a feminine friend or relative, they omit any mention of the mother. Possibly this is because the mother is obviously not a visitor on the scene, while relatives and friends may arrive, visit, and depart much like the event of a menstrual period. Such a visit also has a personal meaning to the visited, usually entails both inconvenience and pleasure, frees the hostess to attend to other facets of life when the visit is over, and leaves behind the assurance that the visitor may return once more.

Among the miscellaneous and frequently bizarre phrases were "cotton candy bars," "G-day," "fire-engine," "I'm a woman," "cloudy weather," "my belly burped," and "this is my day." A very small number of responses mentioned pregnancy and were phrased as "I'm not pregnant," "having babies," and "thanks to God."

summary

Colloquial expressions indicative of menses as "sickness" or "the curse" were found most often in the oldest group, which also used correct terms most frequently (18 per cent) and referred most often to the mechanics and restrictions (16 per cent) involved.

At the other extreme, the teenagers most frequently used simpler but cyclic terms and more casual expressions than did either of the older groups. The concept of a visiting friend or relative occurs most frequently in the youngest group. These kinds of vernacular or folk-type expressions undoubtedly occur in other cultures and could be classed as tangential. They may be used to ward off a menstrual threat.

The 20-to-40 year group distinguished itself only by giving the fewest references to the mechanics and restrictions of menstruation, a finding somewhat surprising, because this age group is actually most actively and directly involved in the cyclic phenomenon of menstruation.

conclusion

To understand patients as people and to increase our understanding of their implicit attitudes, we on the health team need to know the range of words and expressions used for an experience as common as menstruation. In many situations of medical practice it may be important to learn the ways in which a patient speaks of menstruation. A woman's attitudes toward her feminine functions play an important part in her concept of self. Likewise, the attitudes of parents toward this area of living cannot but affect their attitudes and behavior toward their maturing children.

Table 2

Vocabulary Usage by Age Group

Category	Age Groups -20	 20-40	 40+
	%	%	%
Technical Terms	4.2	14.6	18.3
Cyclic References	50.2	39.1	27.2
Casual Terms	9.8	8.1	3.8
Injury or Sickness	2.5	4.0	8.8
"The Curse"	3.7	7.0	14.5
Reference to Mechanics	10.5	9.3	16.0
Visitor or Friend	12.1	9.6	3.4
Number Responses	428	355	361
Number Respondents	318	342	208

As physicians we are concerned with the when and what of teaching about menstruation and with the psychological maturity and attitudes of those who impart this knowledge to our children of both sexes. As teachers and facilitators of health, we need also to be able to teach parents to do this long-term job easily and well.

As thinking individuals we may want to know this facet of functional vocabulary as a part of the health folklore. We may also be interested in the shifts and changes in the colloquialisms—from the expression "falling off the roof" of 30 years ago to today's term of "defrosting."■

Mental Health Research Institute

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Termination of the Small Saphenous Vein

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Worldwide interest in the surgery of varicose veins has led to renewed study and review of the anatomy of the veins of the lower extremity. Descriptions of the deep veins of the leg as well as the great saphenous vein (saphena magna) have been reported in recent years by Sherman[1], Linton[2], Daseler[3] and others. There is, however, little information regarding the anatomy of the termination of the small saphenous (saphena parva) vein. This knowledge is of vital importance in the high ligation of the vein. In order to review and amplify the available descriptions of the vein, I have examined thirty-five limbs.

The small (short, lesser, external) saphenous vein begins on the lateral side of the foot and passes upward behind the lateral malleolus, lateral to the tendo calcaneous and thence up the center of the back of the calf to the knee.[5] This arrangement is constant.

The medial sural cutaneous nerve, a branch of the tibial nerve, passes down the back of the leg from the popliteal fossa deep to the crural fascia but very close to the vein. It is joined by the peroneal communicating nerve in 80.7 per cent of cases to form the crural nerve. The latter pierces the deep fascia in the middle of the leg and lies very close or adherent to the small saphenous vein. It may be injured in stripping operations on the vein.

Throughout its lower course the small saphenous vein lies in the superficial fascia of the foot, ankle and lower leg. In the upper half of the leg it is usually embedded in a tunnel in the deep (crural) fascia. Usually it then pierces the deep fascia to enter the popliteal fossa, but in many cases it continues up the medial aspect of the thigh in the fascia lata and joins the great saphenous vein directly or by one of its communicating branches, or it passes via a perforating vein to the deep veins in the Hunter's canal.[4]

In the lateral half of the foot and back of the leg the small saphenous vein has multiple communications with the great saphenous vein, with its ascending (arch) branches and with perforating veins passing to the deep veins of the foot, ankle and leg. In the upper half of the leg, where the vein is heavily invested in fascia, it receives relatively few communicating branches.

The vein has from six to nine valves directing

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abstract

MULLARKY, R. E. (2649 Shoreland Drive South, Seattle, Washington, USA.) Termination of the Small Saphenous Vein. Northwest Med 62:878-880 (Nov) 1963.

The small saphenous vein has a constant origin just posterior to the lateral malleolus but variable termination back of the knee. In 90 limbs, in combined series, it terminates in the popliteal vein in 56.6 per cent of cases. Connection with the popliteal vein is absent or represented by an unimportant twig in 43.4 per cent of cases (69 limbs). The transverse epicondylar line is an accurate landmark for locating the popliteal vein, the knee joint and the usual termination of the small saphenous vein.

abstracto

MULLARKY, R. E. (2649 Shoreland Drive South, Seattle, Washington, USA.) Termination of the Small Saphenous Vein. Northwest Med 62:878-880 (Nov) 1963.

La safena menor tiene un origen constante inmediatamente posterior al maléolo lateral, pero una terminación variable en el aspecto posterior de la rodilla. Esto es de interes quirúrgico. En 90 extremidades estudiadas, terminó en la vena poplítea en 56.6 por ciento de los casos. Conección ausente con la poplítea, o reducida a una pequeña y no importante rama se vió en 43.4 por ciento de los casos. La línea transversa epicondilar se usa como referencia para localizar la vena poplítea, la articulación de la rodilla y la usual terminación de la safena menor.

From the Department of Anatomy, University of Washington School of Medicine, under the direction of David L. Bassett, M.D., Professor of Gross Anatomy.

Table 1

Small Saphenous Vein Terminates In:

	Popliteal vein only		Popliteal vein and higher veins		Higher veins only		Veins below level popliteal fossa		Total	
	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
Kosinski	52	42	19	15.3	41	33.3	12	9.4	124	
Mullarky	19	54.3	7*	20	9	25.7	0	----	35	
Combined	71	44.65	26	16.35	50	31.44	12	7.56	159	100

97 - 7* or 90 cases, 56.6 per cent, enter popliteal vein.
69 cases, 43.4 per cent, do not enter popliteal vein.

*Only a tiny branch enters the popliteal vein

the blood upward. Its communicating veins have valves directing blood into it. When it drains directly into the great saphenous vein or one of its branches, the valves then direct the blood upward into these vessels.[6]

personal observations

In my series of thirty-five dissections of the vein there were 19 cases, 54.3 per cent, in which the small saphenous vein terminated directly into the popliteal vein, usually near the center of the popliteal fossa. The termination into the popliteal vein was from 1 centimeter below the knee joint to 10 centimeters above it, or 5 centimeters below to 6 centimeters above the transverse epicondylar line.*

In nine cases, 25.7 per cent, there was no connection with the popliteal vein. Six of these, 17 per cent, terminated in the great saphenous vein or in muscular perforators to Hunter's canal. Three cases or 8.7 per cent terminated in the biceps femoris muscle and its blood drained into the venous system of that muscle.

The remaining seven cases, 20 per cent, terminated in the biceps femoris or the semimembranosis muscle but also sent a small twig to the popliteal vein, Fig. 1.

In this series, therefore, 54.3 per cent ended in the popliteal vein, while 45.7 per cent did not, or supplied only a small twig to it.

variations according to Kosinski

In 1926, Kosinski studied this vein in 124 cases and his findings are accepted as authoritative.[5,8] He describes three main variations in the termination of the small saphenous vein.

I. In 57.3 per cent (71 cases) the vein joined the popliteal vein. Of these, 42 per cent (52 cases) ended exclusively in the popliteal vein, while 15.3 per cent (19 cases) joined the popliteal and then continued up the back of the thigh.

II. In 33.0 per cent (41 cases) there was a high termination on the thigh, either into the great saphenous vein or into the deep femoral

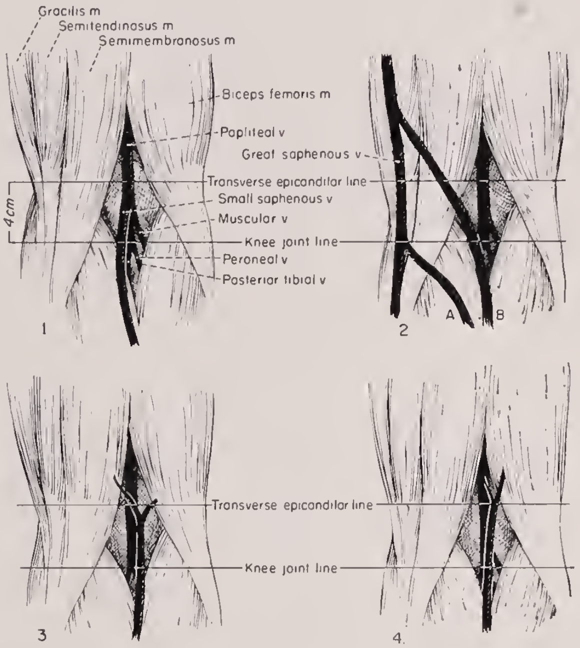

Fig. 1. Common variations of the termination of the small saphenous vein. 1.) Directly into the popliteal vein in 54.3 per cent of cases. 2.) a. Into great saphenous vein below the knee (9.7 per cent of Kosinski series). b. Into great saphenous vein above the knee in 17 per cent of cases. 3.) Termination in lower thigh muscles in only 8.7 per cent of cases. 4.) Termination in thigh muscles with twig to popliteal vein in 20.0 per cent of cases.

---

*The transverse epicondylar line is an accurate landmark for locating the midpoint of the popliteal fossa. The line is constant and easily located by pressing the thumb and index finger downward on the lateral and medial epicondyles of the femur. In contrast, the line of the knee joint, as noted in 16 skeletons, averages 4 centimeters below the epicondylar line and parallel to it. The popliteal vein runs vertically between the midpoints of these two lines.

veins of the thigh. In 13.7 per cent (17 cases) the vein terminated in the biceps femoris muscle.

III. In 9.7 per cent (12 cases) the vein did not reach the popliteal region but ended below the knee either in the great saphenous vein or in the veins of the leg muscles usually those in the gastrocnemius.

Combining my findings with those of Kosinski (Table 1), it appears that in 97 of the 159 cases, or 61 per cent, the small saphenous vein terminated partly or wholly into the popliteal vein and that in 62 cases or 39 per cent it terminated elsewhere. If the 7 cases of the present series which sent only a tiny twig to the popliteal were eliminated from this group, the number entering significantly into the popliteal vein is reduced to 90 cases or 56.6 per cent, while those terminating elsewhere are increased to 69 cases or 43.7 per cent. Whether this is justifiable is debatable because in the shifting drainage that may occur in pathological states the smaller termination may well become the more important one. In this connection, one recalls the observation of Dodd and Cockett when operating for varicosity of the small saphenous vein.[8] They noted that "almost always" it terminated in the popliteal vein. Nevertheless, the facts presently available point to the smaller figure of 56.6 per cent as terminating in the popliteal vein.

When ligating the small saphenous vein in the popliteal fossa or when using it as a guide for ligating the popliteal vein, it is important to be aware that the latter is also subject to considerable variation. Williams found that at the level of the knee joint there was a single large trunk representing the popliteal vein in only 26 per cent or 13 of 50 limbs.[7] In 33 limbs he found two venous trunks at this level and in four there were three veins. In my series of 35 dissections this was found to be true at the knee joint line, but at the level of the transverse epicondylar line there was invariably only one popliteal vein and this was also the line where the small saphenous vein usually terminated in the popliteal vein.■

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Direct Testing of Aerosol Sprays for Treatment of Superficial Burns

T. REED INGHAM, M.D. Olympia, Washington

During the past decade there has been a rapid increase in number of products marketed in aerosol packages for dispensation of various medicaments. Freon has been the common propulsive agent and this, like others used, has been lighter than the medication dispensed. In some cases the dispensing can must be kept vertical; in others the use of a flexible, weighted tube inside the container permits the medication to be discharged irrespective of container position.

The gas propelled preparations are of wide variety, from "setting hair-do" to preparation of skin with benzoin prior to adhesive strapping. I am primarily concerned with those preparations used for the protection of skin from pressure sores, and treatment of superficial burns and abrasions. Two basic types are now on the market: those which contain no bacterial inhibitors and offer primarily a plastic coating to protect skin; and those which contain medicaments to deter bacterial growth, either with or without associated plastic spray.

It is to be noted that all of the sprays used are recommended for skin protection and treatment of superficial abrasions and burns; the first two (A and B) contain no plastic coating but do contain bacterial deterrant medicaments; the third (C) contains both; the last two (D and E) contain only plastic material without other medicaments. (See list, page 883)

Since introduction of sulfonamides and antibiotics, various sensitivity tests have been devised to determine the relative bacterial resistance to the various available drugs of this type. The most common method has been the use of discs, placed on solid type culture media, on which the established cultures can be plated, and the relative deterrant effect of each disc noted. Other methods, a bit more exacting and time consuming, determine the relative dilution effects on antibiotics when placed with established cultures in fluid media. Both of these procedures require a fair amount of bacteriological equipment, space and time, and a technician quite well trained in bacteriological procedures.[1]

laboratory experiments

Although we, as doctors of medicine, have been exposed to most of these procedures, we have been, in many instances, away from laboratory work so long that we are inclined to delegate this type of work to others. This is all well and good when laboratory service is readily available, but there are occasions when it is

abstract

INGHAM, T. R. (Memorial Clinic, Olympia, Washington, USA.) Direct Testing of Aerosol Sprays for Treatment of Superficial Burns. Northwest Med 62:881-883 (Nov) 1963.

Spray preparations for wound dressing, both medicated and non-medicated, were tested by direct application to blood agar plates inoculated with wound secretions. Bacterial sensitivity to the agents used was determined within hours. Time was saved and wound healing was usually facilitated. Unmedicated sprays were useful in holding medicaments in place.

abstracto

INGHAM, T. R. (Memorial Clinic, Olympia, Washington, USA.) Direct Testing of Aerosol Sprays for Treatment of Superficial Burns. Northwest Med 62:881-883 (Nov) 1963.

Se estudiaron preparaciones de tipo aerosol o atomizador usadas en el tratamiento de heridas. Preparaciones con antibióticos se aplicaron directamente a medios de cultivo inoculados con secreciones de las heridas. Asi se puede determinar susceptibilidad bacterial en unas cuantas horas, se ahorra tiempo y se facilita la curación. Otros aerosoles sin agentes inhibidores bacteriales, se usan para fijar y mantener medicamentos en contacto prolongado con la herida.

nice to have a simple, quick method which we can use ourselves and from which we can draw our own conclusions regarding effectiveness of medicaments against infection.

The simple method to be described evolved largely from curiosity as to what probably happens to surface bacteria when aerosol preparations are applied to the skin. This presentation does not intend to present an exhaustive analysis of the subject, but rather to point the way and possibly to encourage others, with more time and facilities available, to repeat this work for more complete evaluation.

In the first of three experiments, blood agar plates were streaked with known cultures of either coagulase positive or coagulase negative staphylococci. Immediately thereafter, quadrants of these plates were sprayed with the medicament to be tested, on a once-over-lightly basis leaving, in each instance, a quadrant unsprayed as control.

This first experiment indicated that product A offered no deterrant to growth of coagulase positive staphylococci, and only slight, transient effect against coagulase negative staphylococci. Product B spray appeared highly effective against staphylococci on this simulated clinical approach and, most important, the results were quite conclusive within five hours.

A second experiment was then carried out on a broader scale. Two types of virulent *E. Coli* in addition to coagulase positive and negative cultures of staphylococci were used on blood agar plates, and tests were made with aerosols of products A, B, C and D. Product C was ineffective as a deterrant to bacterial growth even when combined with other sprays; B and D showed good effect against staphylococci, but were erratic against *E. Coli*. Product A was a poor deterrant of staphylococci growth, but fairly effective against *E. Coli;* combinations of these last three agents appeared quite effective against all tested bacteria.

A third experiment was then carried out to recheck the findings of the second. In this case product E was added to the list of medicaments, and a second spraying was done after 19 hours incubation to more closely approximate the clinical use of these sprays on a daily basis. On this occasion *E.Coli* was plated on endo media. The cultures were somewhat inconsistent so that the results may be open to some question. Spraying was done on an even lighter basis than on the two previous experiments. In general, it appears that E is no deterrant to bacterial growth; B and D are effective against both staphylococci and *E.Coli;* A is quite effective against *E.Coli* but not against staphylococci unless a known effective agent (e. g. B or D) also is used. Product C again appeared to fail in some cases even when combined with proven effective agents.

results

During the past year the tentative conclusions from the above experiments have been applied in practice. On some occasions exudative purulent abrasions have lent themselves to direct smears on blood agar plates, followed by quadrant sprays with desired medicaments. Within six hours the results were conclusive and the medication used (product D) proved to be effective. An official report from the bacteriological laboratory confirming this was received three days later, during which time the abrasion was well on its way to complete healing, with objective test already showing that the choice of medication had been proper.

This method of direct testing does not always work well, because a direct streaking of purulent exudate to blood agar plate does not always flourish; in such cases a preliminary 24 to 48 hour broth culture is required, and the time saved from routine laboratory procedure is thereby lost.

Another facet of the problem that has been found useful is the application of B or D powder to abrasion surface, then applying A spray to hold same in place. This appears to give a durable, dry surface that needs little further attention. The same method has been applied to burns with equal success, and when small areas are involved, minimizes the need of dressings.

The direct spraying of purulent exudate cultures on blood agar plates may prove useful to doctors whose practice is quite distant from established laboratories; blood agar plates and broth culture tubes are commercially available and keep well; small incubators are inexpensive or, for that matter, easily fabricated.

It is important not to regard the treatment of many superficial abrasions and burns, as a surface treatment only. Concomitant systemic therapy with sulfonamides or antibiotics has an important part in the management of the patient's problem.

conclusions

1. Aerosol sprays have a place in the treatment of abrasions and similar skin defects.

2. The relative effectiveness of different medicated sprays can be evaluated quickly on plate cultures from the lesions involved.

3. Plastic sprays are particularly useful to hold large concentrations of desired antibiotic and antiseptic powder upon surface to be treated. ■

529 W. Fourth Avenue

REFERENCE

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Aerosol sprays used in this work:

A. Methacrylate resin with tetramethylthiuram disulfide in ethyl acetate with dichlorodifluoro—and trichloromonofluoromethane as propellants. Trade name: Rezifilm surgical spray dressing, E. R. Squibb & Sons, N.Y.

B. Polymyxin B Sulfate 100,000 units, zinc bacitracin 8,000 units, neomycin sulfate 100 mg, inert propellant dichlorodifluoromethane and trichloromonofluoromethane q. s. spraying time 100 seconds. Trade name: 90 gm Neosporin Aerosol, Burroughs Wellcome & Co.

C. Co-polymers of hydroxy-vinyl chloride acetate and sebacic acid, 9.3 per cent by weight and modified maleic rosin ester solvent with fluorochloro hydrocarbon as gaseous propellant. Trade name.: Aeroplast, spray-on plastic bandage and protective surgical dressing, Aeroplast Co., Dayton, Ohio.

D. 5-nitro-2-furaldoxime 0.2 per cent in a base of hexylene and polyethylene glycols. Propellants (50 per cent): trichloromonofluoromethane and monochlorodifluoroethane. Trade name: Furacin solution aerosol, Eaton Laboratories.

E. Cellulose acetate butyrate 2.7 per cent by weight and 2-ethylhexyl diphenyl phosphate 4.0 per cent by weight in an acetone solvent with fluorochlora hydrocarbons as a gaseous propellant. Trade name: Scan spray on wound dressing, Johnson & Johnson, New Brunswick, N.J.

No financial support was received for this study. With one exception the firms whose products were used were not advised of the project. Eaton Laboratories learned of the work but were not asked for support.

IDEAS ON LIBERTY

If Jefferson and Adams and Franklin and the others on the drafting committee and in the Congress had been taught to believe that there is something inherently wrong with an affluent society; if they had been assured that an economy managed by a self-anointed elite was the safe and ideal climate for security; if they had been brought up in the doctrine that huge and permanent public debt is not only an evil but a positive good; and if all this had been buttressed by the assurance that it was the obligation of government to furnish them employment, see that they got good wages, subsidize their enterprises, guarantee them against loss, insure them in case of illness, underwrite the price of their produce, pay them for not producing at all, —if this had been their background, do you think they would ever have created on this continent a new nation, conceived in liberty? Would they have pledged to that new nation their lives, their fortunes, and their sacred honor—or would they have demanded first that it agree to idemnify them against any loss or inconvenience they might sustain in the hazardous adventure of the Revolution?

Ralph Bradford, Education Now and Then
The Freeman, October, 1963, p 39.

Long-Term Trifluoperazine Therapy in a Schizophrenic Patient

WILLIAM A. JOHNSON, M.D., Longview, Washington

With increasing use of phenothiazines as long-term, maintenance therapy for schizophrenic patients, the question naturally arises: How long can one safely administer these drugs? This question seems particularly pertinent in connection with the newer phenothiazines since few studies report their long-term use.

In reviewing the published literature on trifluoperazine, I found that Ayd administered the drug to a group of 100 ambulatory patients for periods of two months to one year. He performed blood studies, liver function tests and urinalyses at one, two, three, and four-month intervals. He repeated these tests at the end of one year on the thirty patients who were still taking trifluoperazine. He reported, "On the basis of the laboratory findings, it appears that trifluoperazine administered from two months to one year, had no deleterious effect upon the blood, liver or kidneys in the these patients."[1] Rogers reported that some patients received trifluoperazine for 26 months.[2] Since one of my patients received trifluoperazine for considerably longer with no untoward reactions—continuously for 2½ years, then after a four-month interruption for an additional seven months—I thought the following case history might be of interest.

CASE REPORTS

Since 1954 this 34-year-old married woman, a chronic, undifferentiated schizophrenic, has been hospitalized seven times. In August, 1959, while a patient at the Western State Hospital, Fort Steilacoom, Washington, she was given trifluoperazine, 5 mg three times a day, with good results and was discharged in December, 1959, on a maintenance dosage of 15 mg daily. She continued to take trifluoperazine until the spring of 1962, a period of about 2½ years. At this time she discontinued medication on her own. Four months later, in August, her psychotic symptoms recurred and she was rehospitalized.

When trifluoperazine was reinstituted, she again improved and was discharged in September, 1962, on a maintenance dosage of 5 mg three times a day. She has since continued to take the drug, and her daily dosage has been increased to 5 mg four times a day.

During this period of prolonged trifluoperazine therapy, which totals 37 months to date (April, 1963), this patient has experienced no untoward reactions to the drug. A complete blood count in January, 1959, was normal; additional laboratory studies made while the patient was hospitalized were reported as normal. Since her discharge in September, she has also faced several family crises that might have precipitated a relapse: the suicide of a sister in December and separation from her husband and family for the past five months.

One cannot conclude much from a single case history; however the experience seen here is encouraging regarding the possible safety of long-term trifluoperazine therapy. One must still observe all patients carefully for any toxic symptoms or abnormal laboratory finding, especially extrapyramidal and hematopoietic effects.■

1417 - 15th Avenue

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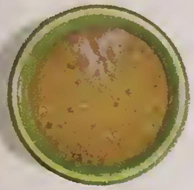
Report of a drug trial on a single case must be interpreted with care. It may reveal possibilities but cannot indicate probabilities. The following statement appears on page 483-484 of New and Nonofficial Drugs, 1963:

"Extrapyramidal symptoms of all three major types occur more frequently with trifluoperazine than with agents of the dimethylamino subclass. Akathisia and dyskinetic reactions occur more commonly than reactions of the Parkinson-type syndrome, especially in children, who appear to be unusually susceptible to the development of dystonias.

"Skin eruptions, lactation, and excessive lacrimation have been reported occasionally. One case of jaundice has occurred, and one report of allergic purpura and one of agranulocytosis have recently been published. Thus, although the incidence of these effects seem lower than with the dimethylamino-type phenothiazines, patients should be observed closely for the onset of blood and liver abnormalities as well as for extrapyramidal disorders."

We agree with the last paragraph of Dr. Johnson's article. Ed.

How many make a bowl of soup, Doctor?



Naturally, the number of beans, peas or lentils that go into a bowl of Campbell's soup will depend on the variety of soup and on what our experience and our chefs tell us should be in the soup. But you can be sure of one thing: every bowl of Campbell's soup made with the legumes you see in our picture, will be nutritious and of course delicious.

We think you'd enjoy Campbell's Bean with Bacon Soup, Green Pea, Black Bean, Minestrone, or Vegetable Bean Soup. Certainly, your patients would, too . . . and if you can get a patient to enjoy the food he needs to eat, he'll be more likely to stick to the diet you prescribe.

But when you plan diets for patients, don't take time to count the beans. Instead, you can count the calories or grams of protein in these soups. You'll see at once that several of our soups would be very desirable to use if you have a patient who needs to put on weight. Bean with Bacon Soup, for instance, contains about 133 calories and 6.8 grams of protein in a 7 oz. serving; and Chili Beef Soup, about 131 calories and 6.2 grams of protein.

At the other end of the scale, many of Campbell's Soups are good to use if you want to give a patient something satisfying but with fewer calories. Vegetable Bean has about 82 calories and 4.4 grams of protein; Minestrone only 83 calories and about 4.9 grams of protein per 7 oz. serving.

We feel you'd be interested in the new series of nutritional analyses of all our different soups. Write today for your copy: Campbell Soup Company, Dept. 87, Camden, New Jersey.

Recommend Campbell's Soups to your patients . . . and, of course, enjoy them yourself. There's a soup for almost every patient and diet, for every meal.

Why treat early, mild or labile hypertension?

Current opinion strongly indicates that the early control of mild or intermittent hypertension prevents or delays the rise of blood pressure to dangerous levels that disable the patient or shorten his normal life span.[4,8,9,17] It is at this early, still responsive, stage that treatment is most effective—blood pressure is more easily held in check and symptoms either disappear or do not develop. Therapy should be not only safe and effective, but as free as possible from disturbing side effects that may burden the often asymptomatic hypertensive patient. Therapy with CAPLA (mebutamate) closely meets these requirements.

the right therapy for the early, mild

Brief Summary

Indications: 'Capla' (mebutamate) is indicated for control of hypertension, either alone in mild cases, or in conjunction with diuretics or peripherally acting hypotensive agents in more severe cases. Its mild tranquilizing properties are often found an additional benefit to its antihypertensive action. *Side effects:* Drowsiness and occasional lightheadedness, usually transient, are often signs of dosage higher than necessary for therapeutic effect. *Contraindications:* There are no known contraindications to mebutamate.

Complete product information available in the product package or to physicians on request.

Dosage: Usual dosage, one 300 mg. tablet 3 or 4 times daily, before meals and at bedtime. Dosage should be adjusted to individual requirements; for example, older patients may require lower dosage.

Supplied: Each tablet contains mebutamate, 300 mg.; bottles of 100 white, scored tablets.

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10/63 63WL36K-32

Why CAPLA® (mebutamate) is indicated.

CAPLA (mebutamate) aims at the ideal in therapy for the early, mild or labile patient—to treat the hypertension while avoiding dangerous or distressing side effects.[2,3,5-7,10-16,18-20] With the first dose, CAPLA (mebutamate) begins to ease pressure toward normal; and, on regular dosage, helps hold blood pressure to a more normal range. CAPLA (mebutamate) works gently by acting directly at the vasomotor control centers to normalize the flow of constricting impulses from the brainstem to the arterioles.[1] With this unique central acting pressure lowering agent, *all* autonomic and *most* other side effects are avoided.[2,3,5-7,10-16,18-20]

or labile hypertensive...CAPLA® (mebutamate)

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Wallace Laboratories, Cranbury, New Jersey

OREGON

Oregon Medical Association—2164 S. W. PARK PLACE, Portland 5, Oregon

PRESIDENT *Daniel K. Billmeyer, M.D., Oregon City*
SECY.-TREAS. *Ernest T. Livingston, M.D., Portland*
EXECUTIVE SECRETARY *Mr. Roscoe Miller, Portland*
annual meeting, October 13-17, 1964, Eugene

Name change

The Oregon State Medical Society voted in favor of a resolution presented by the House of Delegates to change the organization's name to Oregon Medical Association.

In presenting the recommendation, the House of Delegates Committee on Revision of Bylaws gave two major reasons for the name change.

Deletion of the word *state* eliminates any connotation that the organization is affiliated with the state government. Use of the word *association* more nearly reflects the actual organizational structure of the medical group, which is a federation of component medical societies. The name change was the final order of business during the general membership meeting and will go into effect immediately.

Oregon Medical Association will be composed of some 2,025 members representing 25 component medical societies in the state.

Seacat president-elect

James H. Seacat, 46, a Salem general surgeon, is the president-elect of the Oregon Medical Association.

He was elected unanimously at the final business meeting of the Association's 89th annual session in Portland. Dr. Seacat succeeds Daniel K. Billmeyer of Oregon City.

A native of South Dakota, Dr. Seatcat received his academic training at the University of South Dakota. He attended medical school and served his surgical service at Vanderbilt University, Nashville, Tennessee.

Married and the father of four children, Dr. Seacat is active in several professional organizations. He is a Fellow of the American College of Surgeons, a diplomate of the American Board of Surgery and a member of the Portland and Salem Surgical Societies. He has previously served the Oregon Medical Association as a delegate, vice president and most recently as secretary-treasurer.

Dr. Seacat was with the U.S. Army Medical Corps in the ETO for more than two years. For 12 years he has had a private practice in Salem.

Other Association officers elected during the meeting include Murdock E. McIntyre, Eugene, vice president; Ernest T. Livingstone, Portland, secretary-treasurer; and Florian J. Shasky, Medford, alternate delegate to the American Medical Association.

Re-elected to their present posts were Glenn M. Gordon, Eugene, speaker of the House of Delegates; Max H. Parrott, Portland, delegate to the American Medical Association and Jon V. Straumfjord, Astoria, committee on publications.

Some 1,500 doctors, wives and exhibitors attended the annual session which ended with the Oregon Medical Golf Tournament at Royal Oaks Country Club in Vancouver, Washington.

Medical aspects of sports

The Fifth National Conference on Medical Aspects of Sports, sponsored by the AMA will be held December 1, at the Benson Hotel, Portland, in conjunction with the AMA Clinical Meeting. Among the wide range of subjects to be discussed are: abdominal injuries in sports, medical care of the high school athlete, ankle trauma in athletics, applied anatomy for physicians and trainers, and upper extremity taping demonstrations. A luncheon meeting with a discussion of medical telemetry in sports, and an evening session with a symposium on knee injuries will conclude the meeting. Further information may be obtained from the Secretary, Committee on Medical Aspects of Sports, American Medical Association, 535 North Dearborn Street, Chicago, Illinois, 60610.

continued on page 893

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Patients with high blood pressure plus one or more symptoms of tension—restlessness, rapid heart rate, excessive sweating, agitation—benefit from the distinctive calming action of Serpasil (reserpine). It shields the tense hypertensive patient from nervousness that raises his blood pressure. Result: pressure goes down, heart rate decreases. Useful in all grades of hypertension, either alone or as a background agent.

Average Dosage: 0.25 to 0.5 mg. daily.

Side Effects: Occasional: lassitude, drowsiness, nasal congestion, looseness of stools, increased frequency of defecation. Rare: anorexia, headache, bizarre dreams, nausea, dizziness. Nasal congestion and increased tracheobronchial secretions may occur in babies of mothers treated with reserpine.

Cautions: Severe mental depression has appeared in a small percentage of patients, primarily in a dosage above 1 mg. daily. Usually the patient had a pre-existing, incipient, endogenous depression which was unmasked or accentuated by reserpine. When the drug is discontinued, depression usually disappears, but hospitalization and shock therapy are sometimes required. Daily dosage above 0.25 mg. is contraindicated in patients with a history of mental depression or peptic ulcer. Withdraw Serpasil (reserpine) 2 weeks before surgery, if possible. For emergency surgical procedures, vagal blocking agents should be given parenterally to prevent or reverse hypotension and/or bradycardia.

Supplied: Tablets, 0.1 mg., 0.25 mg. and 1 mg.

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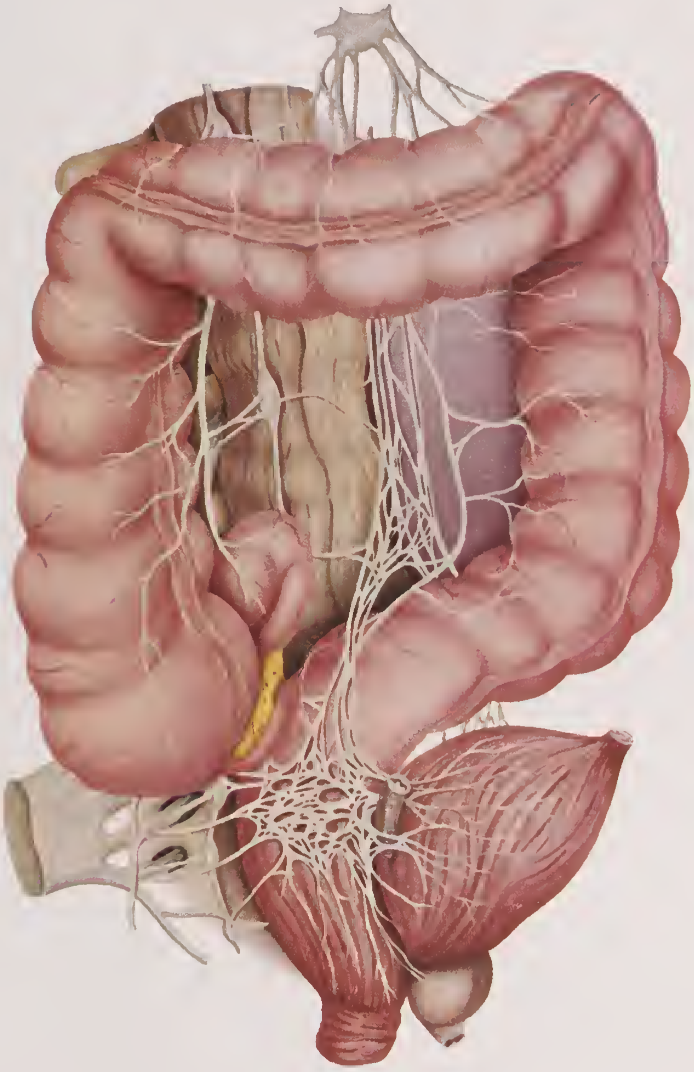
mepenzolate bromide



calms the hyperactive colon

calms the hyperactive colon

IN · irritable colon
spastic colon
ulcerative colitis

cantil®

mepenzolate bromide

RELIEVING · pain · cramps · bloating
propulsive hypermotility / diarrhea
spastic contractions / constipation

Action is exerted *selectively* on the colon with less effect on other viscera. One or two tablets three times a day and one or two at bedtime usually provide prompt relief. Begin with lower dosage and adjust according to response. CANTIL with PHENOBARBITAL may be prescribed if sedation is required.

Dryness of the mouth or blurring of vision may occur but is usually mild and transitory. Urinary retention is rare. Caution should be observed in prostatic hypertrophy — withhold in glaucoma.

CANTIL

(mepenzolate bromide) — 25 mg. per scored tablet.
Bottles of 100 and 250.

CANTIL WITH PHENOBARBITAL

containing in each scored tablet 16 mg. phenobarbital (warning: may be habit forming) and 25 mg. mepenzolate bromide. Bottles of 100 and 250.

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PRESIDENT'S page

D. K. BILLMEYER, M.D.

I extend my greetings to all fellow members of the Oregon Medical Association through this one medium we have of communication.

The paint is barely dry on the new name for our Association, and we just barely have the dust brushed off of your new president, and this year is underway full tilt.

In the past few years the state president has brought you a message of real concern dealing with our survival at the national and local level, a message dealing with our contact with each other, a message of conduct to patient and physician—all the things to awaken an awareness in you of the problems and responsibilities you have as physicians. I believe this is probably the approach of adults to adults; however, as I stated in my first statement as president of the Association, the pediatrician's job is that of cleaning up behind the obstetrician. This is the position of the present administration of the Oregon Medical Association.

The functions at the state level are for one purpose in my mind—to be representative of each and every physician who belongs to the Association. To be representative we must hear your complaints, your gripes, your arguments and your praise. My first plea to you is: please communicate with us so that I might truly be your representative at the state level.

Fraternally,

David K. Billmeyer, M.D.

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continued from page 888

Outstanding family physician

Archie O. Pitman, Sr., was selected by the Oregon Academy of General Practice as the Outstanding Family Physician of the year and was presented with a plaque during the banquet of the 89th annual session of the Oregon Medical Association.

Dr. Pitman is a past president of the Washington County Medical Society, Oregon Medical Association, University of Oregon Medical School Alumni Association, Oregon Physicians' Service and the Western Conference of Prepaid Medical Care Plans. He is also active in the American Medical Association, and the Oregon Academy of General Practice.

Dr. Pitman was born in Hillsboro where he received his public education. He attended the University of Oregon and the University of Oregon Medical School and served his internship at the Multnomah County Hospital in Portland. He began his private practice in 1929 at Forest Grove and one year later returned to Hillsboro.

Doctors licensed in Oregon

At the conclusion of a regular meeting of the board of Medical Examiners held on October 3, 4, and 5, David B. Judd, Secretary, announced that 15 doctors qualified for licensure to practice medicine and surgery in Oregon. Those who received licenses to practice medicine and surgery are: Richard Allan Anderson; Gary Walker Cage; Donald Wayne McIllece; and George John Vennes, all of Portland. Frank Nelson Burgoyne, San Francisco; James Clifford Davies, Moscow, Idaho; Sami Daye, Salem; Richard Duane Frisbie, Grants Pass; Stanley Lawrence Holme, Salem; John Herman Kuitert, Corvallis; Hugh LaMaster, Clifton, Arizona; Dorothy Frances LeBoeuf, Brooking; Robert Allen Mendelson, El Paso, Texas; Gordon Kermit Peterson, Salem; and Louis Martin Wolfe, Salem.

The next regular meeting of the Board of Medical Examiners is set for January 16, 17, and 18, 1964. The next State Board Written Examination will be given on January 14 and 15, 1964.

Dr. Leman honored

Oregon's Doctor-Citizen of the Year, Craig B. Leman of Corvallis, was honored by the Oregon Medical Association, at the annual banquet of the Association's 89th annual session.

Dr. Leman was presented a plaque by Melvin W. Breese, OMA president, in recognition of his activities in international and community health programs.

For three months in 1961 and for a like period in 1962, Dr. Leman served as a volunteer on Project Hope. His tours of duty included serving as surgeon in Indonesia and South Viet-Nam, and as chief of surgical staff in Peru on the S.S. Hope.

He has been active in various civic groups in Corvallis, including the Rotary Club, United Good Neighbors, Red Cross and Benton County Health Council. In 1961, he served as a member of the Corvallis Board of Examiners and Appeals. He has been the motivating force in the medical self-help program of Benton County and has conducted Red Cross first aid and home nursing classes in Corvallis.

Dr. Leman is certified by the American Board of Surgery and a fellow of the American College of Surgeons. He is on the surgical staff of Good Samaritan Hospital, Corvallis, was secretary of staff 1959-1960, and served as chief of surgery in 1960-1961.

Dr. Leman attended the University of Chicago, and Harvard Medical School. He completed his surgical residency at Peter Bent Brigham Hospital, Boston, Mass. During World War II he was a second lieutenant in the Marine Corps and holds the Silver Star and the Purple Heart.

Billmeyer installed as president

Daniel K. Billmeyer, Oregon City pediatrician, was installed as the 90th president of the Oregon Medical Association during the Association's annual banquet in Portland.

Dr. Billmeyer, a native of Montana, received his education at the University of Chicago School of Medicine. After interning at St. Vincent Hospital, Portland, he entered the U.S. Army Medical Corps and served from 1947 to 1951.

He completed his residency in pediatrics at the University of Oregon Medical School Hospitals and Clinics in 1954.

The new president, married and father of four children, has been active in the affairs of organized medicine since entering private practice. He has served as president of the Clackamas County Medical Society and as speaker of the Oregon Medical Association's House of Delegates.

Dr. Billmeyer is also a member of the Portland and American Academies of Pediatrics, Oregon and West Coast Societies of Allergy, North Pacific Board of Pediatrics and is certified by American Board of Pediatrics.

Research staff

Manuel Rene Malinow, formerly of Buenos Aires, Argentina, has joined the research staff at the Oregon Regional Primate Center. He has been interested in cardio-vascular research since graduation from La Facultad de Ciencias Medicas, de Buenos Aires, in 1944.

continued on page 913

Formerly nervous and tense,
now better able to...

make decisions

This, in essence, is what happens when you place a patient on Librium (chlordiazepoxide HCl). Since this agent generally relieves anxiety and tension without dulling mental clarity or inducing drowsiness, most patients become better able to function normally, take an active interest in family and surroundings, meet and solve daily problems. This antianxiety agent is virtually free from extrapyramidal side effects, and does not produce or deepen depression.

Anxiety and tension relieved
Alertness maintained

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(chlordiazepoxide HCl) ROCHE®
the successor to the tranquilizers

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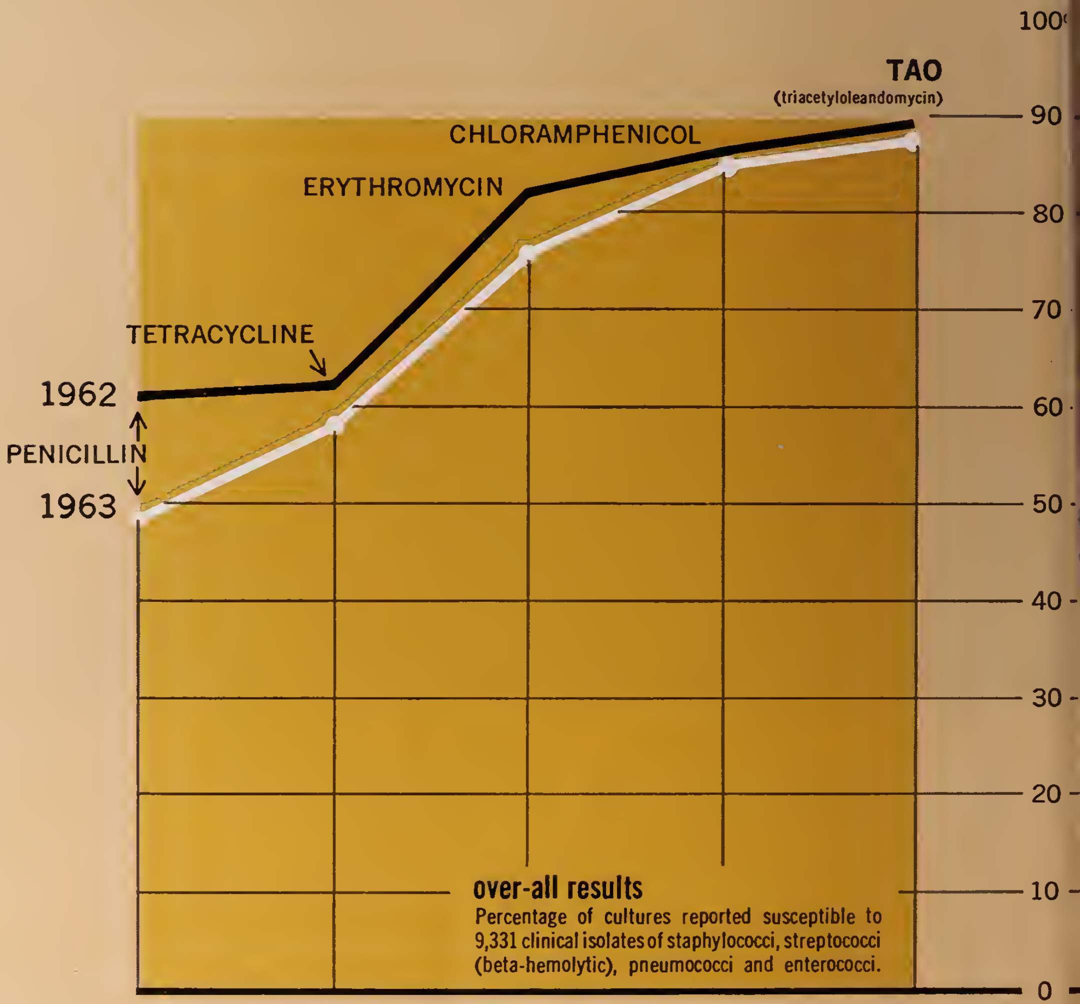
Dosage: Usual adult dose in mild to moderate anxiety and tension is 5 or 10 mg, 3 or 4 times daily; in severe anxiety and tension, 20 or 25 mg, 3 or 4 times daily. Side effects: Drowsiness and ataxia, usually dose-related, have been reported in some patients—particularly the elderly and debilitated. Paradoxical reactions, *i.e.*, excitement, stimulation, elevation of affect and acute rage, have been reported in psychiatric patients; these reactions may be secondary to relief of anxiety and should be watched for in the early stages of therapy. Other side effects, usually dose-related, have included isolated instances of minor skin rashes, minor menstrual irregularities, nausea, constipation, increased and decreased libido. Precautions: In elderly, debilitated patients, limit dosage to smallest effective amount to preclude development of ataxia or oversedation (not more than 10 mg per day initially, to be increased gradually as needed and tolerated). Until the correct maintenance dosage is established, patients receiving this agent should be advised against possibly hazardous procedures requiring complete mental alertness or physical coordination. Caution patients about possible combined effects with alcohol. Caution should be exercised in administering Librium (chlordiazepoxide HCl) to addiction-prone individuals. Careful consideration should be given to the pharmacology of any agents to be employed concomitantly—particularly the MAO inhibitors and phenothiazines. Observe usual precautions in impaired renal or hepatic function. Periodic blood counts and liver function tests may be advisable in protracted treatment. Caution should be exercised in prescribing any therapeutic agent to pregnant patients.

NOW FROM 66 HOSPITALS . . .

Nationwide Comparison of Microbial Susceptibility to 5 Leading Antibiotics. The 1963 antibiotics survey is unpreceden
its scope. In all, susceptibility results of 9,331 cultures were collected from 66 hospitals in 26 states. The bacteria st
were isolated from overt clinical infections, and tested by the disc sensitivity method for susceptibility to five widely
antibiotics. Each participating hospital laboratory reported the over-all susceptibility of the specified bacteria studie
week. The data thus collected were then compared and analyzed by electronic data processing equipment.

The in vitro findings indicate the over-all superiority of TAO (triacetyloleandomycin) over four leading antibiotics a
staphylococcus aureus (coagulase positive), streptococcus pyogenes (beta-hemolytic), diplococcus pneumoniae, and
tococcus pyogenes Group D (enterococcus). These 1963 data broaden and confirm the 1962 study of 9,872 cultures i
continuing hospital survey of antibiotics.

RESULTS FROM new 1963 NATION



over-all results
Percentage of cultures reported susceptible to 9,331 clinical isolates of staphylococci, streptococci (beta-hemolytic), pneumococci and enterococci.

SUSCEPTIBILITY RESULTS BY ORGANISM

	Staphylococcus (coagulase positive) (5440)	Streptococcus (β-hemolytic) (1519)	Pneumococcus (1130)	Enterococcus (1242)
TAO (triacetyloleandomycin)	88.0%	95.2%	97.1%	63.9%
Erythromycin	68.9%	96.7%	96.7%	68.5%
Tetracycline	50.9%	79.9%	92.9%	36.6%
Chloramphenicol	82.2%	94.2%	96.8%	72.3%
Penicillin	27.0%	94.9%	96.8%	45.0%

(figures in parentheses indicate total number of cultures)

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(triacetyloleandomycin)

WIDE SURVEY OF ANTIBIOTICS[1]

ndications: The bacterial spectrum for which TAO (triacetylo-
eandomycin) primarily is effective includes staphylococci, strep-
ococci, pneumococci and gonococci. It is recommended for acute
evere infections where adequate sensitivity testing has demon-
trated susceptibility to this antibiotic. It has been shown to be
articularly effective in acute, severe infections of the respiratory
ract, bones and joints, genitourinary tract and in staphylococcal
nterocolitis. It is not recommended for prophylaxis or in the man-
gement of infectious processes which may require more than
0 days continuous therapy. In view of the possible hepatotoxicity
f this drug, when therapy beyond 10 days proves necessary, other
ess toxic agents, of course, should be used unless the organism is
esistant to those agents, or in those cases where hypersensitivity
recludes their use. If clinical judgment dictates continuation of
herapy for longer periods, serial monitoring of liver profile is
ecommended, including BSP, transaminase (SGOT) and cephalin
locculation tests.

eferences: 1. Isenberg, Henry D., Ph.D.: Scientific Exhibit presented at
he meeting of the American Medical Association, Atlantic City, New Jersey,
une 16-20, 1963. 2. Fowler, J. Ralph, Watters, John L. and Levy, Arthur M.:
linical Medicine, 70:547 (Mar.) 1963.

precautions and side effects: Use of this drug may produce alterations in liver function tests and jaundice. Clinical experience available thus far indicates that these liver changes were reversible following discontinuation of the drug. A review of studies by several independent investigators and reports from practicing physicians indicate that liver function abnormalities may occur in a significant number of patients following two weeks or more of continuous therapy with triacetyloleandomycin at 1.0 gram per day in divided doses. Clinical symptomatology, including jaundice, has been observed infrequently in these individuals. The drug is not recommended for subjects who have shown abnormal liver function tests or hepatotoxic reactions to it. Based upon the use of this drug over a period exceeding 5 years, the incidence of jaundice considering all reports referable to this effect is 6.3 per million courses of therapy. When only those which definitely can be related to this drug are equated to usage, the incidence is 1.8 per million courses of treatment.

Although reactions of an allergic nature due to this drug are infrequent and seldom severe, those of the anaphylactoid type have occurred on rare occasions.

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Available as:
Capsules (250 mg.; 125 mg.)
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Parenteral (as oleandomycin phosphate)

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PROPERTIES: Haxsen combines muscle relaxant properties of mephenesin with sedative action of secobarbital sodium presenting a balanced, safe, prompt acting prescription.

Each Tablet Contains	
Mephenesin N.F.	6 grs.
Secobarbital Sodium U.S.P.	½ gr.

INDICATIONS: To relax the tense, anxious restless patient, so-called anxiety-tension state . . . gives pleasurable relaxation, tranquility.

SUPPLIED: Bottles of 100 and 1000 tablets.

DOSAGE: Usual adult dose: One tablet every four hours, after meals. Economical to use.

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Each teaspoon (5 cc.) contains:

Codeine phosphate	5.0 mg.
Neo-Synephrine® hydrochloride (brand of phenylephrine hydrochloride)	2.5 mg.
Chlorpheniramine maleate	0.75 mg.
Potassium iodide	75.0 mg.

Bright red, pleasant tasting, raspberry flavored syrup

Dosage:

Children from 6 months to 1 year, 1/4 teaspoon; 1 to 3 years, 1/2 to 1 teaspoon; 3 to 6 years, 1 to 2 teaspoons; 6 to 12 years, 2 teaspoons. Every four to six hours as needed.

How Supplied:
Bottles of 16 fl. oz.

Exempt Narcotic

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CARBOHYDRATE
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because lactose
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*just add T.L.C.**
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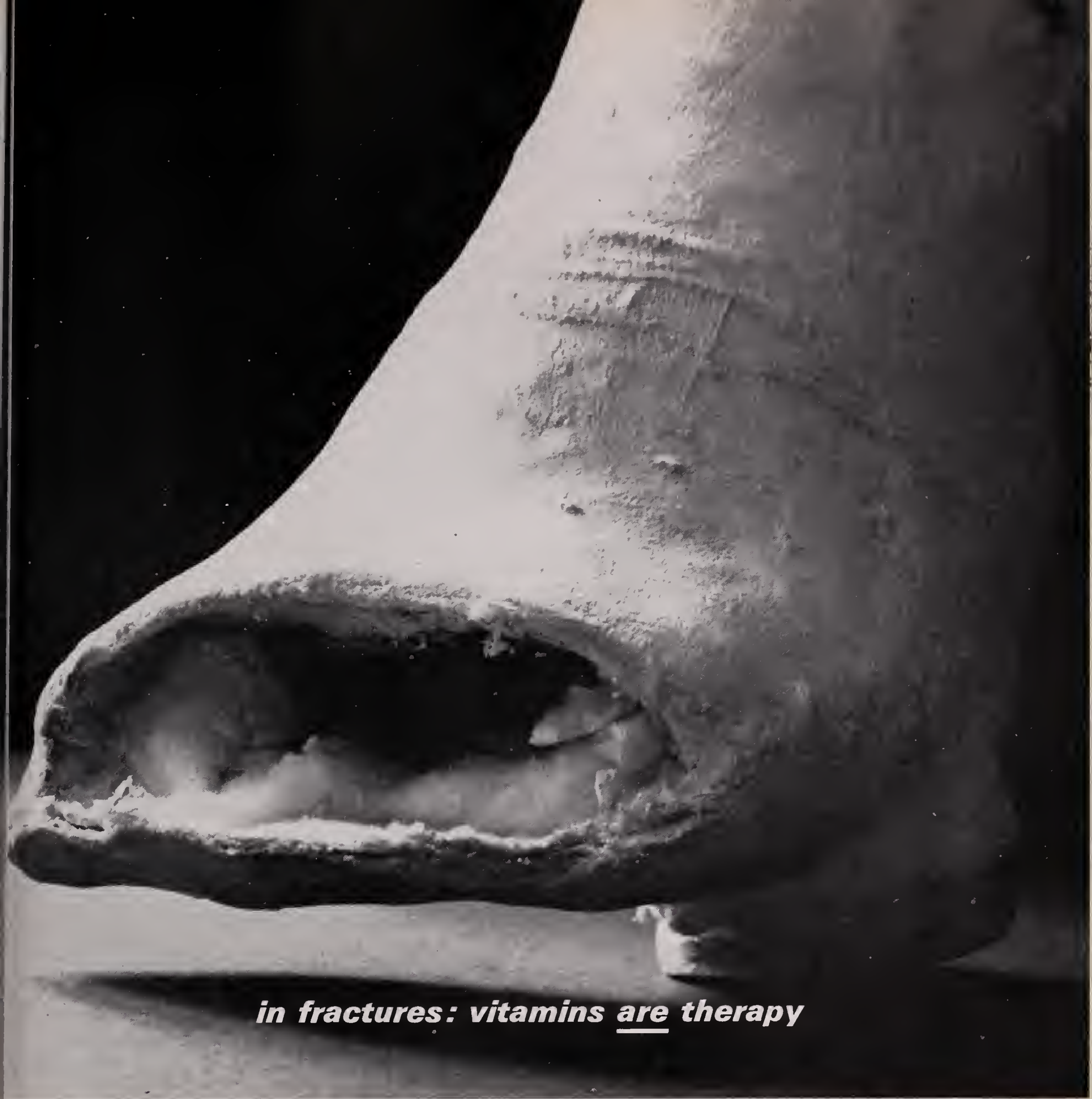

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BOOKS

RECEIVED: The following books have been received. Publication of this acknowledgement is to be considered adequate return to the sender. Selected titles will be reviewed as space permits.

Diagnostic tests in infants and children. By Hans Behrendt, M.D., Association in Pediatrics, New York Medical College, Metropolitan Medical Center, New York, N.Y. 617 pp. Illustrated. Price $15.00. Lea & Febiger, Philadelphia. 1962.

Introduction to the study of disease. By William Boyd, M.D., Dipl. Psychiat., MRCP, Hon. FRCP, FRCP (Lon.), FRCS (Can.), FRS (Can.), LL.D. (Sask.), (Queen's), D.Sc. (Man.), M.D. (hon.) (Oslo), Professor Emeritus of Pathology, University of Toronto; Visiting Professor of Pathology, University of Man. and U.B.C. 5th Edition. 478 pp. Illustrated. Price $7.50. Lea & Febiger, Philadelphia. 1962.

Regulation of respiration. Edited by Harold E. Whipple, Managing Editor Stanley Silverzweig, Consulting Editor G. G. Nahas. Pages 411-948. Price $6.00. New York Academy of Sciences. 1963.

Pediatric cardiology. By Alexander S. Nadas, M.D., F. A. A.P., Associate Clinical Professor of Pediatrics, Harvard Medical School. 828 pp. Illustrated. Price $16.00. W. B. Saunders Company, Philadelphia. 1963.

Orthopedic diseases. By Ernest Aegerter, M.D., Professor of Pathology and Director of the Department of Pathology, Temple University Medical Center and School of Medicine; and John A. Kirkpatrick, Jr., M.D., Radiologist, St. Christopher's Hospital for Children. 786 pp. Illustrated. Price $16.00. W. B. Saunders Company, Philadelphia. 1963.

Handbook of the practice of anethesia. By John R. S. Shields, M.B., Ch.B., F.F.A.R.C.S., Associate Professor of Anesthesiology, Department of Surgery, Washington University School of Medicine, St. Louis, Missouri. 203 pp. Ilustrated. Price $6.85. C. V. Mosby Company, St. Louis. 1963.

Medical mycology. By Chester W. Emmons, PhD., Chief, Medical Mycology Section, Laboratory of Infectious Diseases, National Institute of Allergy and Infectious Diseases, Department of Health, Education and Welfare, Bethesda, Maryland; Chapman H. Binford, A.B., M.D., Research Pathologist, Leonard Wood Memorial Foundation; and John P. Utz, M.D., Chief, Infectious Disease Service, Laboratory of Clinical Investigation, National Institute of Allergy and Infectious Diseases, Department of Health, Education and Welfare, Bethesda, Maryland. 380 pp. Illustrated. Price $14.00. Lea & Febiger, Philadelphia. 1963.

Textbook of medicine. Edited by Paul B. Beeson, M.D., Ensign Professor of Medicine, Yale University School of Medicine and Walsh McDermott, M.D., Livingston Farrand Professor of Public Health, Cornell University Medical College. 1835 pp. Illustrated. Price $19.50. W. B. Saunders, Philadelphia. 1963.

Results of surgery for peptic ulcer. Edited by R. W. Postlethwait, M.D., Associate Editor James C. Thoroughman, M.D. 308 pp. Graphs. Price $8.00. W. B. Saunders Company, Philadelphia. 1963.

Broken long bone. By Robert T. McElvenny, M.D., Senior Attending Surgeon at Chicago Wesley Memorial Hospital, Chicago, Ill.; Illustrations and additions by Ned Murray Grove, M.D., Department of Orthopaedic Surgery, Northwestern University Medical School, Chicago, Ill. 292 pp. Illustrated. Price $11.50. Charles C. Thomas, Springfield, Ill. 1963.

Clinical disorders of the heart beat. By Samuel Bellet, M.D., Professor of Clinical Cardiology, Graduate School of Medicine of the University of Pennsylvania; Director, Division of Cardiology, Philadelphia General Hospital. 1105 pp. Illustrated. Price $28.00. Lea & Febiger, Philadelphia. 1963.

Electrical anesthesia. By Robert H. Smith, M.D., Assistant Professor of Anesthesia, University of California Medical School, San Francisco, California. 54 pp. Price $4.00. Charles C. Thomas, Springfield, Ill. 1963.

An atlas of congenital heart disease. By Frank E. Sherman, M.D., Associate Professor of Pathology, School of Medicine, University of Pittsburgh; Associate Pathologist to Children's Hospital of Pittsburgh. 303 pp. Illustrated. Price $15.00. Lea & Febiger, Philadelphia. 1963.

Hernia. By Amos R. Koontz, M.D., Surgeon to The Johns Hopkins Hospital; Consultant in Surgery to the Surgeon General of the United States Army. 227 pp. Illustrated. Price $11.95. Appleton-Century Crofts, New York. 1963.

Comparative biology of calcified tissue. Consulting Editor Melvin L. Moss, Editor Harold E. Whipple, Managing Editor Stanley Silverzweig. 410 pp. Illustrated. Price $6.00. New York Academy of Sciences, New York. 1963.

Therapeutic exercise, second edition. By Hans Kraus, M.D., Associate Clinical Professor of Rehabilitation and Physical Medicine, New York University College of Medicine. 249 pp. Illustrated. Price $7.50. Charles C Thomas, Springfield, Ill. 1963.

Organization and administration in World War II. Prepared and published under the direction of Lieutenant General Leonard D. Heaton, The Surgeon General, United States Army. Editor in Chief, Colonel John Boyd Coates, Jr., MC, USA. Editor for Organization and Administration Charles M. Wiltse, Ph.D., Litt.D. 613 pp. Illustrated. Price $6.25. Department of the Army, Washington, D.C. 1963.

Clinical examinations in neurology. By members of the Sections of Neurology and Sections of Physiology, Mayo Clinic and Mayo Foundation for Medical Education and Research, Graduate School, University of Minnesota, Rochester, Minnesota. 396 pp. Illustrated. Price $8.50. W. B. Saunders Company, Philadelphia. 1963.

Handbook of pediatric medical emergencies. By Adolph G. DeSanctis, M.D., Professor Emeritus of Pediatrics, Post-Graduate Medical School, New York University-Bellevue Medical Center; and Charles Varga, M.D., Chief, Department of Pediatrics, The Permanente Clinic and Bess Kaiser Hospital, Portland, Oregon. 457 pp. Price $12.75. The C. V. Mosby Company, St. Louis, Mo. 1963.

New reflections on monoamine oxidase inhibition. Edited by Harold E. Whipple, Managing Editor Stanley Silverzweig, Consulting Editor E. A. Zeller. pp. 809-1158. Price $5.00. New York Academy of Sciences, 1963.

Diseases of the chest. By H. Corwin Hinshaw, M.D., Ph.D., D.Sc. and L. Henry Garland, M.B., B.Ch., M.D. 798 pp. Illustrated. Price $20.00. W. B. Saunders Company, Philadelphia. 1963.

Occlusion of the superior mesenteric artery. By Benjamin B. Jackson, M.D., F.A.C.S., Illustrations by Catherine M. Bauscher, B.S. 141 pp. Illustrated. Price $7.50. Charles C Thomas, Springfield, Ill. 1963.

Rhinoscleroma. By Francisco Kerdel-Vegas, M.S., M.D., Jacinto Convit, M.D., Bernard Gordon, M.D., Mauricio Goihman, M.D., and Marion B. Sulzberger, M.D. 111 pp. Illustrated. Price $9.75. Charles C Thomas, Springfield, Ill. 1963.

Diseases of the adrenal glands. By Morton A. Meyers, M.D., Department of Radiology, Presbyterian Hospital, Columbia-Presbyterian Medical Center, New York. 97 pp. Illustrated. Price $5.75. Charles C Thomas, Springfield, Ill. 1963.

Synopsis of ear, nose and throat diseases. By Robert E. Ryan, B.S., M.D., M.S. (ALR), F.A.C.S., William C. Thornell, A.B., B.M., M.D., M.S. (ALR), F.A.C.S., Hans von Leden, M.D., F.A.C.S., F.I.C.S. 425 pp. Illustrated. Price $7.50. The C. V. Mosby Company, St. Louis. 1963.

The pediatric patient. Consulting Editor David B. Coursin, M.D., Coordinating Editor Sarah R. Gustafson, PhD. 183 pp. Price $4.95. Roche Laboratories, Nutley, New Jersey. 1963.

Orthopedic appliances, second edition. By Henry H. Jordan, M.D., Orthopedic Surgeon, Chief of Hemophilia Service, Lenox Hill Hospital, New York. 201 pp. Illustrated. Price $16.50. Charles C Thomas, Springfield, Ill. 1963.

Epidemiology and communicable disease control. By Fred B. Rogers, M.S., M.D., M.Ph., F.A.C.P., Professor of Preventive Medicine, Temple University School of Medicine, Philadelphia, Pa. 104 pp. Graphs. Price $5.50. Grune & Stratton, Inc., New York. 1963.

History of wine as therapy. By Salvatore P. Lucia, M.D., University of California School of Medicine. 234 pp. J. B. Lippincott Company, Philadelphia. 1963.

Fundamentals of medical education. By Thomas B. Turner, M.D., Dean of the Medical Faculty, The Johns Hopkins University, Baltimore. 80 pp. Price $3.75. Charles C Thomas, Springfield, Ill. 1963.

Applied gynecologic pathology. By J. Edward Hall, Professor of Obstetrics and Gynecology, State University of New York, Downstate Medical Center. 404 pp. Price $10.95. Illustrated. Appleton-Century-Crofts, New York. 1963.

A new electronic principle delivers a burst of x-rays for a very short time (.05 microsecond). Radiograph any part of the body; dial 1 to 25 pulses at seven or 14 pulses per second. Child's chest can be exposed with a single pulse. High resolution: 1.5mm x-ray source size. 100 KV or 150 KV. The FExitron 845 makes diagnostic radiography possible anywhere in the hospital. Or out of the hospital, for that matter. We have remarkable radiographs made by the 845 in the jungle. Write or call; we'll answer immediately.

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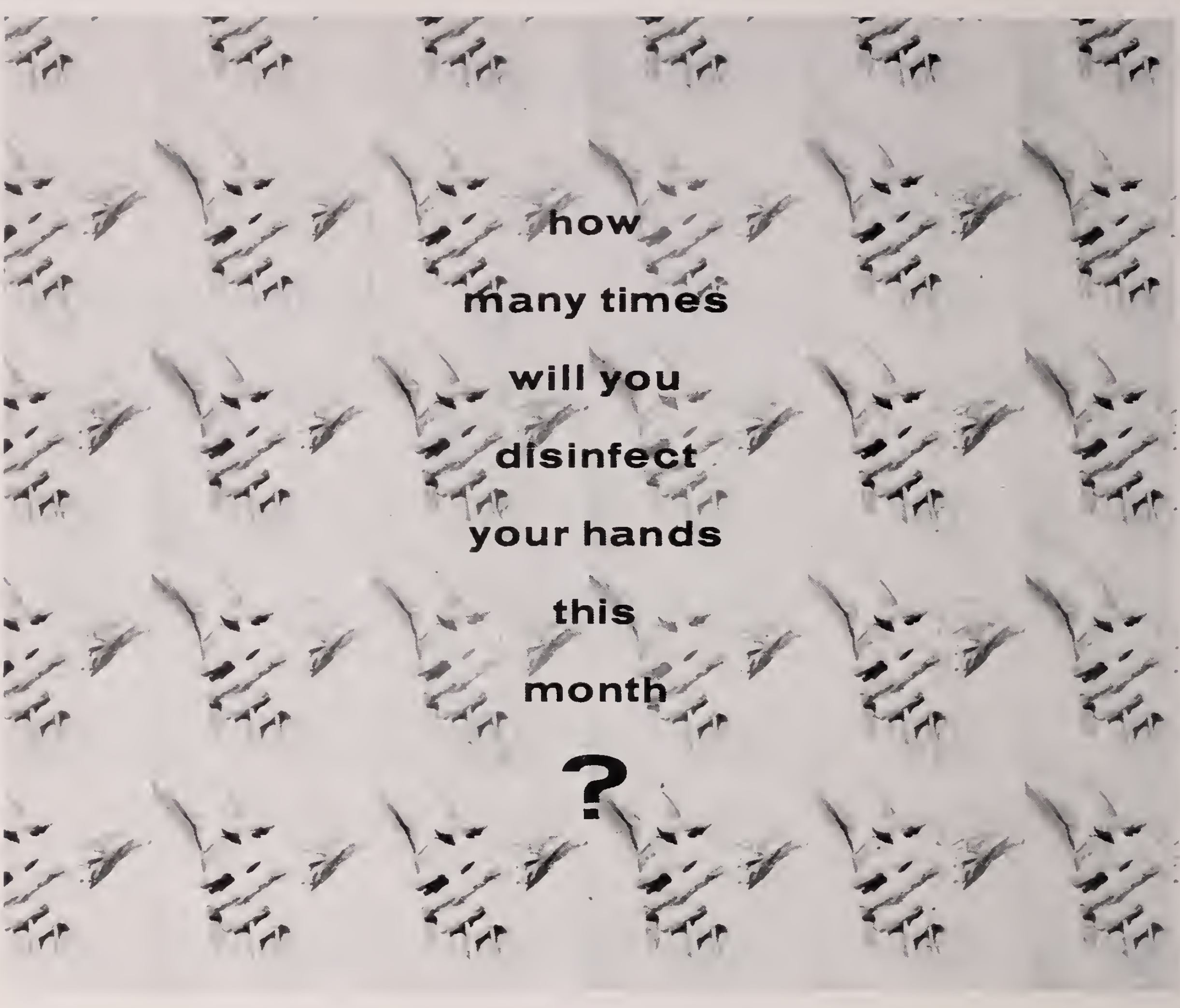

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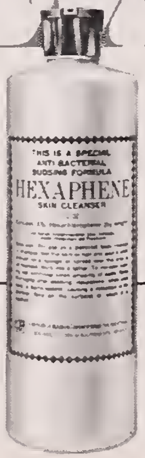

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annual meeting September 13 - 16, 1964, Seattle

Postgraduate course in diabetes mellitus

The section on metabolism at Virginia Mason Hospital will sponsor its third annual postgraduate course in diabetes and related disorders January 13-18, 1964. Lectures by physicians and dieticians, and round table discussions will be made each day. Further information may be obtained from Joseph Crampton, M.D., 1118 9th Ave., Seattle.

OBITUARIES

DR. ALDIS B. JOHNSON, *former president of the Seattle Pediatric Society and the North Pacific Pediatric Society, died September 14 at 63 years. He was a graduate of Northwestern University School of Medicine in 1938. He served as resident at Children's Hospital, Denver, and at Jersey City Medical Center; and he had practiced in Freeport, Illinois, before moving to Seattle.*

DR. CHARLES W. PETERSON, *53, died September 9, of coronary thrombosis. A native of New York, he received his degree from Temple University School of Medicine in 1940. He was licensed in Washington in 1945. During World War II, Dr. Peterson was a Navy physician stationed in Greenland and Iceland. He had practiced in Seattle since 1946.*

DR. ROY C. EDDY, *88, died August 25 of bronchial pneumonia and arteriosclerotic cerebrovascular disease. He was a resident of Mercer Island. His degree was granted by the University of Wooster, Medical Department, Cleveland in 1898. He was retired from active practice.*

DR. ROBERT P. BARNETT, *a native of Spokane, died September 17. He was 40. His degree was granted by St. Louis University School of Medicine in 1948, he was licensed in 1953. He had practiced in Spokane since that time.*

DR. RAYMOND J. LARUE, *of Castle Rock, died September 23 at 59 years. A native of Minnesota, he received his degree at Creighton University School of Medicine in 1931, he was licensed in 1932. He became a trustee of Cowlitz General Hospital in 1944 and was elected president of Cowlitz County Medical Society in January, 1948. He had practiced in Castle Rock since 1933.*

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*U.S. Department of Health, Education and Welfare, Public Health Service Publication No. 813.

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EXECUTIVE SECRETARY *Mr. A. L. Bird, Boise*
annual meeting June 17-20, 1964, Sun Valley

APOLOGY

Last month these pages carried the address of Paul B. Heuston, incoming President, to the House of Delegates of Idaho State Medical Association, at Sun Valley, June 29, 1963. Neither the author of the contribution nor the place of delivery were documented. Our sincere apology to Dr. Heuston. Ed.

Officers and Councilors meet

First meeting of the Officers and Councilors of the Idaho State Medical Association since June was held October 4-5 at Sun Valley under the leadership of President Paul B. Heuston, Twin Falls. Attending the session were Immediate Past-President Manley B. Shaw, Boise; President-Elect Corwin E. Groom, Pocatello; Secretary-Treasurer A. Curtis Jones, Boise; Councilors John M. Ayers, Moscow; William B. Jewell, Emmett; James R. Kircher, Burley; O. D. Hoffman, Rexburg, and A.M.A. Alternate Delegate Donald K. Worden, Lewiston.

Idaho Hospital Association

The 30th annual convention of the Idaho Hospital Association with Hospitals Community Health Centers as the theme, was held at Sun Valley, October 6-9. Mr. Raymond L. Tate, Pocatello, Administrator of the Bannock County Memorial Hospital, is president of the organization.

Other organizations participating in the session include: Blue Cross of Idaho; Idaho Chapter, American Association of Hospital Accountants; Idaho Conference of Catholic Hospitals; Idaho Association of Hospitals Auxiliaries; Idaho Association of Nurse Anesthetists; Idaho Society of Hospital Pharmacists; Medical Record Librarians; and the Insurance Committee, Association of Western Hospitals. Mr. John D. Hutchinson, Boise, is executive secretary of the Hospital Association.

Ada County MS elects officers

New officers of the Ada County Medical Society for the coming year are President: James C. F. Chapman, Boise; President-Elect: Max D. Gudmundsen, Boise; Immediate Past-President: Maurice M. Burkholder, Boise; Secretary: Theodore R. Florentz, Boise; Treasurer: Clayton C. Morgan, Boise; Council Member: O. F. Swindell, Boise. Delegates: J. J. Coughlin, James H. Hawley, Ralph R. Jones, Claude W. Barrick, William D. Forney, Robert E. Lloyd, Frank W. Crowe, J. Gordon Daines, Robert G. Paterson, all of Boise, and John T. Brunn, Meridian. Alternate Delegates: Max F. Bell, Harold B. Hulme, Wesley E. Levi, Frank E. Mather, Glenn E. Talboy, Lawrence H. Mason, Dale B. Patterson, George E. Weick, Charles H. Howarth, Dale D. Cornell and Gus E. Rosenheim, all of Boise.

New number

New telephone number of the Idaho State Medical Association, Boise: 344-7888 or 344-7889. The State Board of Medicine, 344-5811 Ext. 398.

Re-elected

Loy T. Swinehart, Boise, was re-elected Secretary-Treasurer of the North Pacific Pediatric Society during the organization's annual meeting in Victoria, B.C. The society is made up of pediatricians in Idaho, Oregon, Washington, Alaska, Alberta and British Columbia. During the session, H. A. P. Myers, Boise pediatrician, and Hugh Firor, Boise surgeon, presented a paper on Perforating Appendicitis in Premature Infants.

Renewal data

The period for renewing licenses to practice medicine and surgery in Idaho concluded October 1, with a total of 931 physicians paying the renewal

continued on page 911

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*Scal, J. C.: Eye Ear Nose & Throat Month. 38:738 (Sept.) 1959.

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References: 1. Baker, A. G.: Penn. Med. J. *63*:697 (May) 1960. 2. Smith, R. T.: New York Med. (Aug. 20) 1952, pp. 16-19. 3. Smith, R. T.: Med. Clin. N. Amer. (Mar.) 1957. 4. Lehrer, H. W.; Lehrer, H. G., and Lehrer, D. R.: Northw. Med. (Nov.) 1955. 5. Sforzolini, G. S.: Arch. Ophthal. *62*:381 (Sept.) 1959. 6. Gile, J. H.: W. Virginia Med. J. *59*:120-122 (May) 1963.

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fee as required by law. Of this total, 582 are residents of Idaho while 349 live outside of the state. Nine licenses were cancelled for non-payment of renewal fee, two in-state and seven out-of-state.

State Board of Medicine section

During August, Chairman S. M. Poindexter approved issuance of temporary licenses to the following physicians:

Richard E. Ostler, Pocatello. Graduate George Washington University School of Medicine, Washington D.C., June, 1962. Internship Latter Day Saints Hospital, Salt Lake City, July, 1963. Granted T.L. 306, August 5, 1963, general practice.

Robert A. Blome, Nampa. Graduate State University of Iowa College of Medicine, Iowa City, June, 1955. Internship Emanuel Hospital, Portland, June, 1956. Surgical Residency Veterans Administration Hospital, Iowa City, 1956-61. Granted T.L. 307, August 9, 1963, general surgery.

Kenneth R. Briggs, Twin Falls. Graduate Harvard Medical School, Boston, June, 1954. Internship Veterans Administration Hospital, Salt Lake City, July, 1955. Internal Medicine Residency Veterans Administration Hospital, Minneapolis, 1955-58. Psychiatry Residency Veterans Administration Hospital, Boston, 1960-63. Granted T.L. 308, August 9, 1963, psychiatry.

Hazel L. McGaffey, Idaho Falls. Graduate University of Minnesota Medical School, Minneapolis, June, 1950. Internship Swedish Hospital, Seattle, July, 1950. Internal Medicine Residency Firland Sanatorium, Seattle, 1950-51. Pathology Residency University of Colorado Hospitals, Denver, 1955-56; Veterans Administration Hospital, Denver, 1957-60. Granted T.L. 309, August 16, 1963, pathology.

Robert F. Hahn, Idaho Falls. Graduate St. Louis University School of Medicine, St. Louis, June, 1953. Internship St. Louis City Hospital, St. Louis, June, 1954. Internal Medicine Residency Veterans Administration Hospital, Denver, 1957-58; University of Utah School of Medicine, Salt Lake City ,1958-62. Granted T.L. 310, August 16, 1963, internal medicine.

Fritz R. Dixon, Boise. Graduate Indiana University School of Medicine, Indianapolis, June, 1958. Internship Indianapolis General Hospital, Indianapolis, June, 1959. Pathology Residency Bowman Gray School of Medicine, Winston-Salem, 1960-62. Granted T.L. 311, August 21, 1963, public health.

August E. Miller, Jr., Blackfoot. Graduate Northwestern University Medical School, Chicago, June, 1959. Internship Swedish Hospital, Seattle, June, 1960. Surgical Residency Swedish Hospital, Seattle, 1960-61. Granted T.L. 312, August 23, 1963, general practice.

Four physicians applied for and received temporary licenses during September. They were:

Carroll Lee Sincs, Rupert. Graduate School of Medicine, Western Reserve University, Cleveland, Ohio. M.D. Degree, June 11, 1952. Internship University Hospitals of Cleveland, July 1952 to June 1953. General Practice Residency Halifax District Hospital, Daytona Beach, Florida. Anesthesiology residency University Hospitals of Cleveland, 1953-1954. Granted TL-313, September 3, 1963. General practice.

Robert H. Morrell, Boise. Graduate George Washington University School of Medicine, Washington, D.C. M.D. Degree, June 6, 1962. Internship Virginia Mason Hospital, Seattle, Washington, July 1962 to July 1963. Granted TL-314, September 12, 1963. Military duty.

Robert C. DeWeese, Pocatello. Graduate Colorado School of Medicine, Denver. M.D. Degree, June 7, 1952. Internship Abbott Hospital and Janney Childrens Pavilion, Minneapolis, July 1952 to June 1953. Granted TL-315, September 19, 1963. Student Health Service, Idaho State University.

Carl T. Koenen, Lewiston. Graduate Marquette School of Medicine, Milwaukee. M.D. Degree, June 8, 1958. Internship St. Mary's Hospital, Milwaukee, July 1958 to June 1959. Pathology residency St. Mary's Hospital, 1959-1963. Granted TL-316, September 19, 1963. Pathology.

Idaho Academy of General Practice

Northwest Regional Meeting of the American Academy of General Practice was held September 19, 20 and 21 in Idaho Falls. Sponsored by the Idaho Chapter of the Academy, the meeting drew 116 physicians from Idaho, Utah, Wyoming, Washington, Oregon, Arizona, Montana, Nebraska, Indiana and California.

Principal speaker at the convention was Philip Thorek, professor of surgery at the University of Illinois and author of five textbooks in surgery. Other speakers participating in the scientific session included C. Alvin Paulsen, assistant professor of medicine at the University of Washington School of Medicine, Seattle, George E. Cartwright, professor of medicine at the University of Utah College of Medicine, James S. Cheatham, clinical director of the Madison State Hospital, Madison, Indiana, Clayton G. Loosli, dean and professor of medicine at the University of Southern California School of Medicine and Joseph P. Dolan, Ph.D., chairman of Missouri Teachers College's department of health, physical and nursing education.

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continued on page 913

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Idaho News *continued from page 911*

regional meeting a Flying Physician Fly-In with a special banquet, September 19 for the Flying Physicians and their wives. Prizes for the Flying Physicians coming the greatest distances to attend the meeting went to Carl Barr, Tilden, Nebraska, and John A. Carlson, Phoenix, Arizona.

Another highlight of the meeting was the Third Annual Symposium on the Management and Treatment of Athletic Injuries, in which coaches and trainers from throughout the state of Idaho attended day-long seminars. Dr. Dolan was the symposium's featured speaker. Other guest speakers included, G. A. Bacon, orthopedist from Pocatello, J. F. Stecher, internist, Caldwell, and Stanley Sell, orthopedic surgeon from Idaho Falls.

Wendell Petty, Shelley, Idaho, was general program chairman for the convention and L. J. Bingham, Idaho Falls, was in charge of the athletic symposium.

W. Paul Shrum, Hayden Lake, was elected president of the Idaho Academy of General Practice at the chapter's annual business meeting, with Harmon Holverson, Emmett, president-elect and Tius W. McCowin, Shelley, reelected secretary-treasurer. Two new members to the board of directors are Wendell Petty, and John Hoopingarner, Boise. Arch T. Wigle, Pocatello and M. F. Rigby, Rexburg, were named delegates to the national convention with P. Blair Ellsworth, Idaho Falls and Jay P. Merkley, Pocatello as alternate delegates.

Officers of the Idaho Academy of General Practice

Left to Right: T. W. McCowin, M.D., Shelley, Idaho, Secretary-Treasurer; Harmon E. Holverson, M.D., Emmett, Idaho, President-Elect; P. Blair Ellsworth, M.D., Idaho Falls, Idaho, President 1962-63; W. Paul Shrum, M.D., Hayden Lake, Idaho, President 1963-64; and Wendell Petty, M.D., Shelley, Idaho, program chairman for Northwest Regional Meeting.

Oregon News *continued from page 894*

Outstanding exhibit—Terence H. Cochran, left, receives the Aesculapius award for the most outstanding science exhibit at the recent annual meeting of the Oregon Medical Association from Thomas C. McPherson, center, Medical Director for Mead Johnson Laboratories' Western Division, donors of the Award. Looking on is Ernest T. Livingstone, chairman of the annual meeting. Drs. Cochran and James A. Arnold won for their exhibit, "Hippuran Renogram, a Sensitive Test for Renal Blood Flow."

STATEMENT OF OWNERSHIP, MANAGEMENT AND CIRCULATION, Northwest Medicine, 500 Wall Street, Seattle, King Co., Washington, 98121. Date of Filing: September 30, 1963. Frequency of issue: monthly. Location of office of publication: 500 Wall Street, Seattle, King Co., Washington, 98121. Location of headquarters or general business offices of the publishers: 500 Wall Street, Seattle, King Co., Washington, 98121. Publisher: Northwest Medical Publishing Association, 500 Wall Street, Seattle, King Co., Washington, 98121. Editor: Herbert L. Hartley, M.D., 500 Wall Street, Seattle, King Co., Washington, 98121. Owner: Northwest Medical Publishing Association, a Corporation, 500 Wall Street, Seattle, King Co., Washington, 98121, (non-profit organization, no stock holders). Total no. copies printed—average no. during preceding 12 months—6,000, single issue nearest to filing date—6,075 (September). Paid circulation to term subscribers by mail, carrier delivery or by other means—average no. during preceding 12 months—5,425, single issue nearest to filing date—5,452 (September). Sales through agents, news dealers, or otherwise—average no. during preceding 12 months—72, single issue nearest to filing date—72 (September). Free distribution—average no. during preceding 12 months—498, single issue nearest to filing date—498 (September). Total no. copies distributed—average no. during preceding 12 months—5,995, single issue nearest to filing date—6,022 (September).

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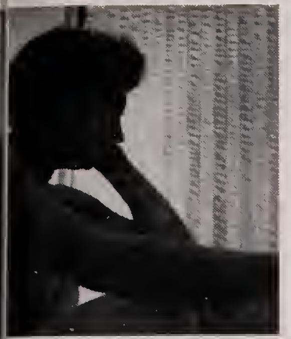
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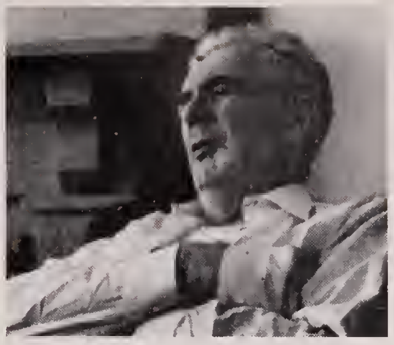
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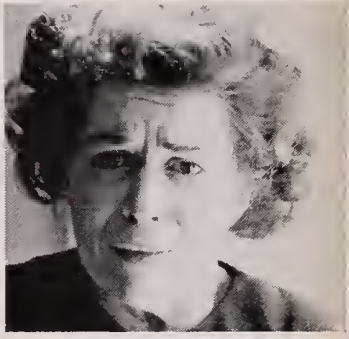
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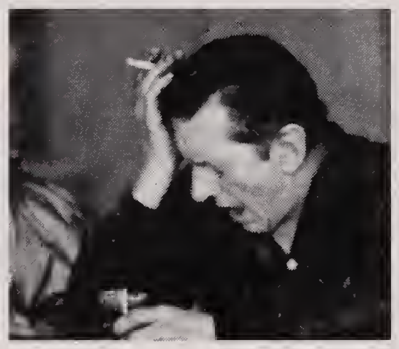
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References: (1) Blouin, L., and Overman, R. R.: Detailed reports in Mead Johnson Research Files.* (2) Gloning, K., and Klausberger, E. M.: Wien. klin. Wchnschr. *70*:145-149 (Feb. 28) 1958. (3) Whittier, J. R., and Dhrymiotis, A. D.: Angiology *13*:324-327 (July) 1962. (4) Horton, G. E., and Johnson, P. C., Jr.: The Application of Radioisotopes to the Study of Cerebral Blood Flow and the Effects of Isoxsuprine (to be published). (5) Dhrymiotis, A. D., and Whittier, J. R.: Current Therap. Res. *4*:124-129 (April) 1962. *Available upon request from Mead Johnson Laboratories, Evansville 21, Indiana.

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Meetings OF MEDICAL SOCIETIES

AMA Annual—San Francisco, June 21-25, 1964, New York, June 20-24, 1965.

AMA Clinical—Portland, Dec. 1-4, 1963; Miami Beach, Nov. 29-Dec. 2, 1964.

Idaho State Medical Association—June 17-20, 1964, Sun Valley.

Northwest Soc. for Clin. Research—Jan. 10-11, 1964, Vancouver, B. C.
Pres., Denys K. Ford, Vancouver
Sec., R. E. Beck, Vancouver

Oregon State Medical Association—Oct. 13-17, 1964, Eugene

Washington State Medical Association—Sept. 13-16, 1964, Seattle.

West Coast Allergy Society, Dec. 5-7, 1963, Las Vegas, Nevada
Pres., M. Coleman Harris, San Francisco
Sec., James E. Stroh, Seattle

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Ore. Acad. Ophth. & Otolar.—Portland Aero Club, 4th Tue., Sept.-May.
Pres., Robert M. Hansen, Portland
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Oregon Dermatologic Society—Portland 2nd Wednesday (Nov., Jan.-Apr.)
Pres., Sheldon Walker, Portland
Sec., F. A. J. Kingery, Portland

Oregon District Branch of American Psychiatric Association
Pres., Emanuel I. Silk, Pendleton
Sec., Henry H. Dixon, Jr., Portland

Oregon Pathologists Association—Portland, 2nd Wednesday (Feb., Apr., Oct., Dec.)
Pres., Terence Cochran, Portland
Sec., K. D. McMilan, Eugene

Oregon Radiological Society—University Club, Portland, 2nd Wednesday through school year
Pres., Fred C. Shipps, Jr., Portland
Sec., James A. Schneider, Portland

Ore. Soc. Obst. & Gynec.—Portland, Park Heathman, 3rd Fri. (Oct., Nov., Jan., May)
Pres., W. L. Hartmann, Portland
Sec., T. A. Treanor, Portland

Oregon State Society of Anesthesiologists—Portland, 3rd Friday (except June, July, Aug.)
Pres., J. A. Siebs, Eugene
Sec., P. E. Schaff, Portland

Oregon Urological Society—Quarterly Meetings, University Club, Portland
Pres., John Hand, Portland
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Portland Academy of Hypnosis—3rd Monday (Sept.-May) Congress Hotel
Pres., Arnold Rustin
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Portland Academy of Pediatrics—1st Monday
Pres., W. M. Clark, Jr.
Sec., J. W. Bussman

Portland Surgical Society—last Tuesday (Sept.-May), UOMS Library
Pres., H. Minor Nichols
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WASHINGTON

Puget Sd. Acad. Ophth. & Oto.—3rd Tues. (Oct.-May) Seattle or Tacoma. Annual—Seattle, Jan. 17, 18, 1964.
Pres., H. L. Maier, Tacoma
Sec., D. F. Milam, Jr., Bellevue

Seattle Academy of Surgery—3rd Wed. bi-monthly; Seattle Yacht Club.
Pres., E. B. Parmelee
Sec., W. S. Brown

Seattle Gyn. Soc.—3rd Wed. exc. June, Aug., Dec., Feb.
Pres., D. M. McIntyre, Seattle
Sect., E. T. MacCamy, Seattle

Seattle Pediatric Society—3rd Friday (Sept.-May), College Club
E. J. Wollenweber, Seattle
A. L. Skinner, Seattle

Seattle Surg. So.—4th Mon. (Sep.-June) Annual—Seattle, Jan. 24-25, 1964.
Pres., Eric Sanderson, Seattle
Sec., R. C. Coe, Seattle

Spokane Society of Internal Medicine—Quarterly, Rockwood Clinic Annual—Mar. 7, 1964
Pres., Loren Gothberg
Sec., Arch Logan, Jr.

Tacoma Academy of Internal Medicine—4th Tuesday (Sept.-May)
Pres., R. A. Kallsen
Sec., R. A. O'Connell

Tacoma Surgical Club—May 2, 1964, 3rd

Tuesday (Sept.-May)
Pres., Dumont Staatz
Sec., Robert B. Burt

Washington Academy of Clinical Hypnosis—3rd Friday (Sept.-June)
Pres., Tom Wall, D.M.D., Seattle
Sec., John E. Nelson, Seattle

Washington Academy of General Practice—Tacoma, May 14-16, 1964
Pres., Duncan Robertson, Seattle
Sec., John Gahringer, Wenatchee

Washington State Obstetrical Associa-October 12, 1963, Yakima.
Pres., R. K. Plant, Seattle
Sec., F. LeCocq, Yakima

Washington State Radiological Society—Seattle, Quarterly
Pres., W. A. Chesledon, Seattle
Sec., R. H. Rosenberg, Seattle

Wash. St. Soc. of Anesthesiologists
Pres., Lucien Morris, Seattle
Sec., Henry D. Green, Seattle

Wash. St. Soc. of Allergy
Pres., Alexander Altrose, Seattle
Sec., Samuel H. Tarica, Seattle

Washington State Society of Internal Medicine—Sept. 18, 1963
Pres., D. M. Ulrich, Seattle
Sec., J. H. Lindberg, Seattle.

Yakima Obstetrical and Gynecological Society—Last Monday (except July, Aug., Dec.)
Sec., A. W. Bostrom, Jr.

Yakima Surgical Society—Last Thursday (Sept.-May)
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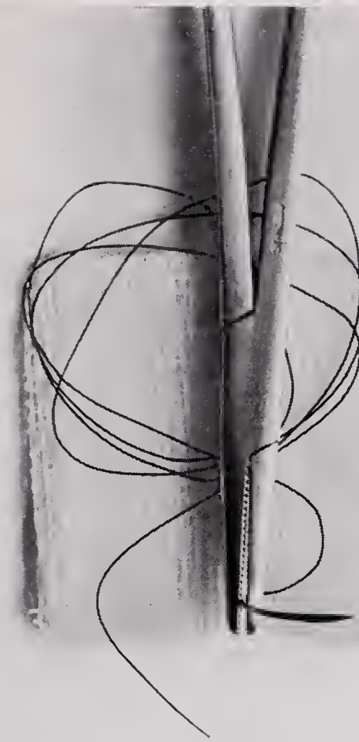

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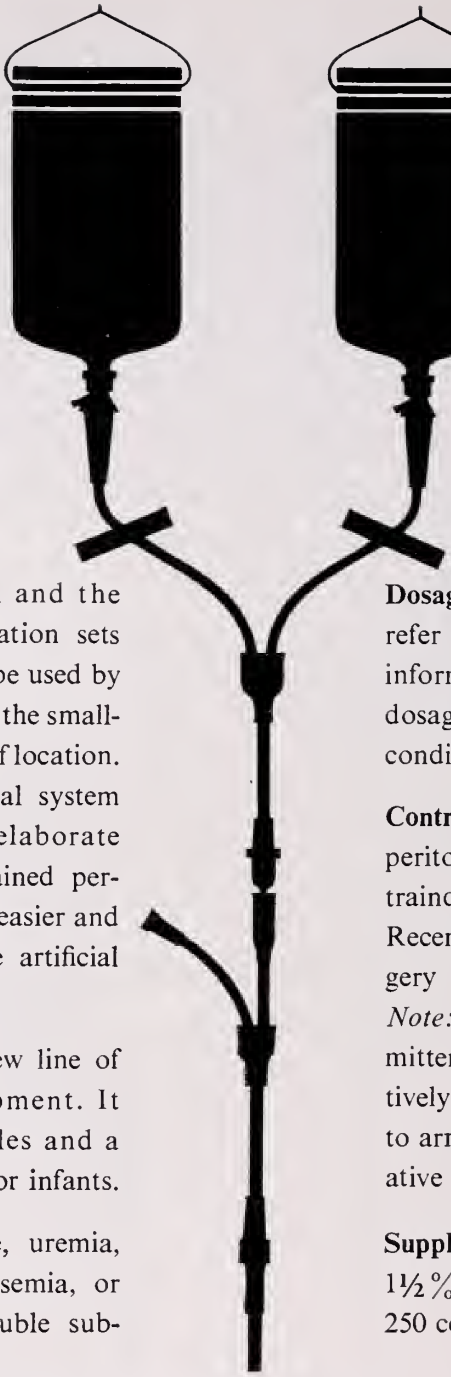

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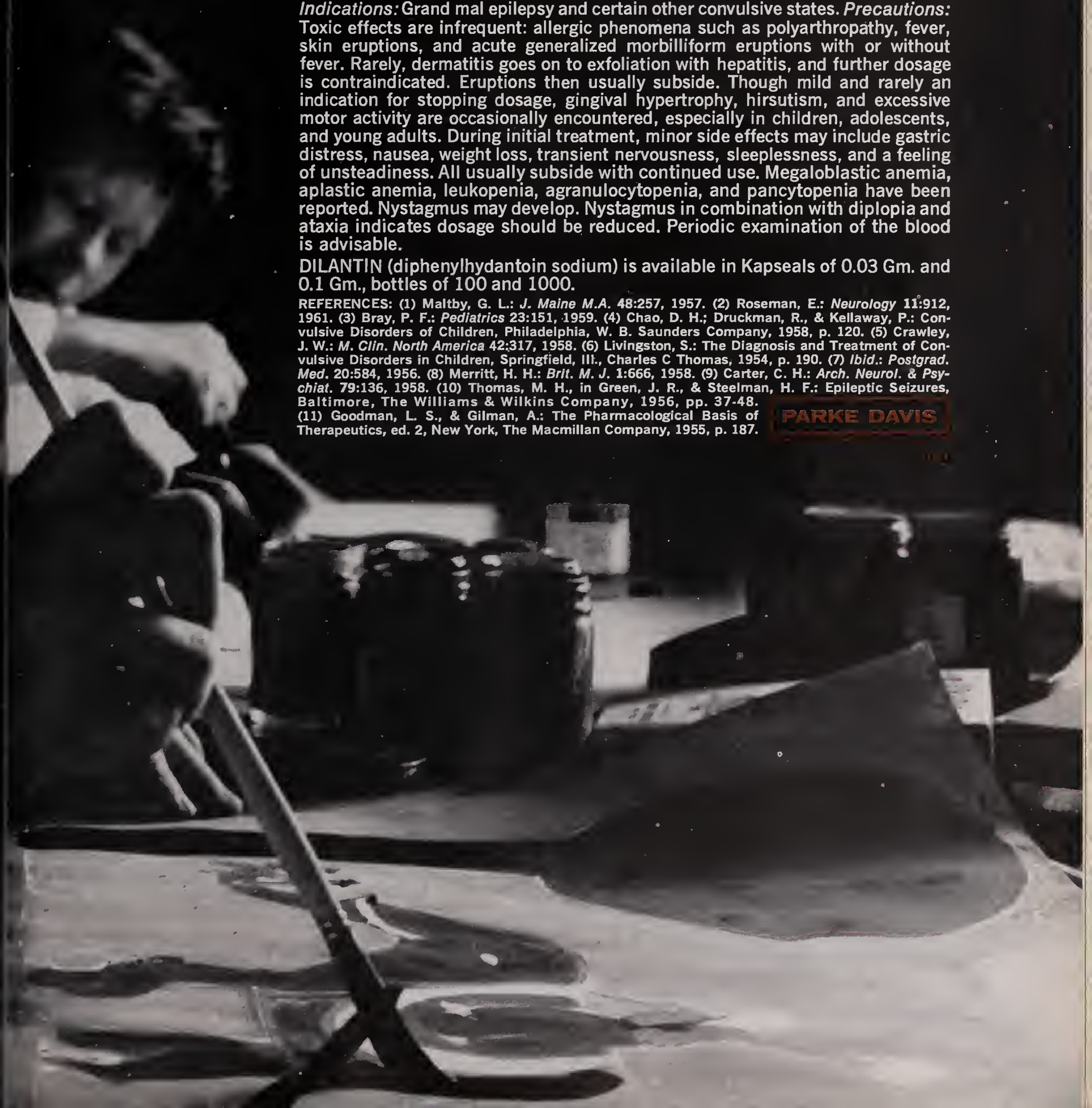

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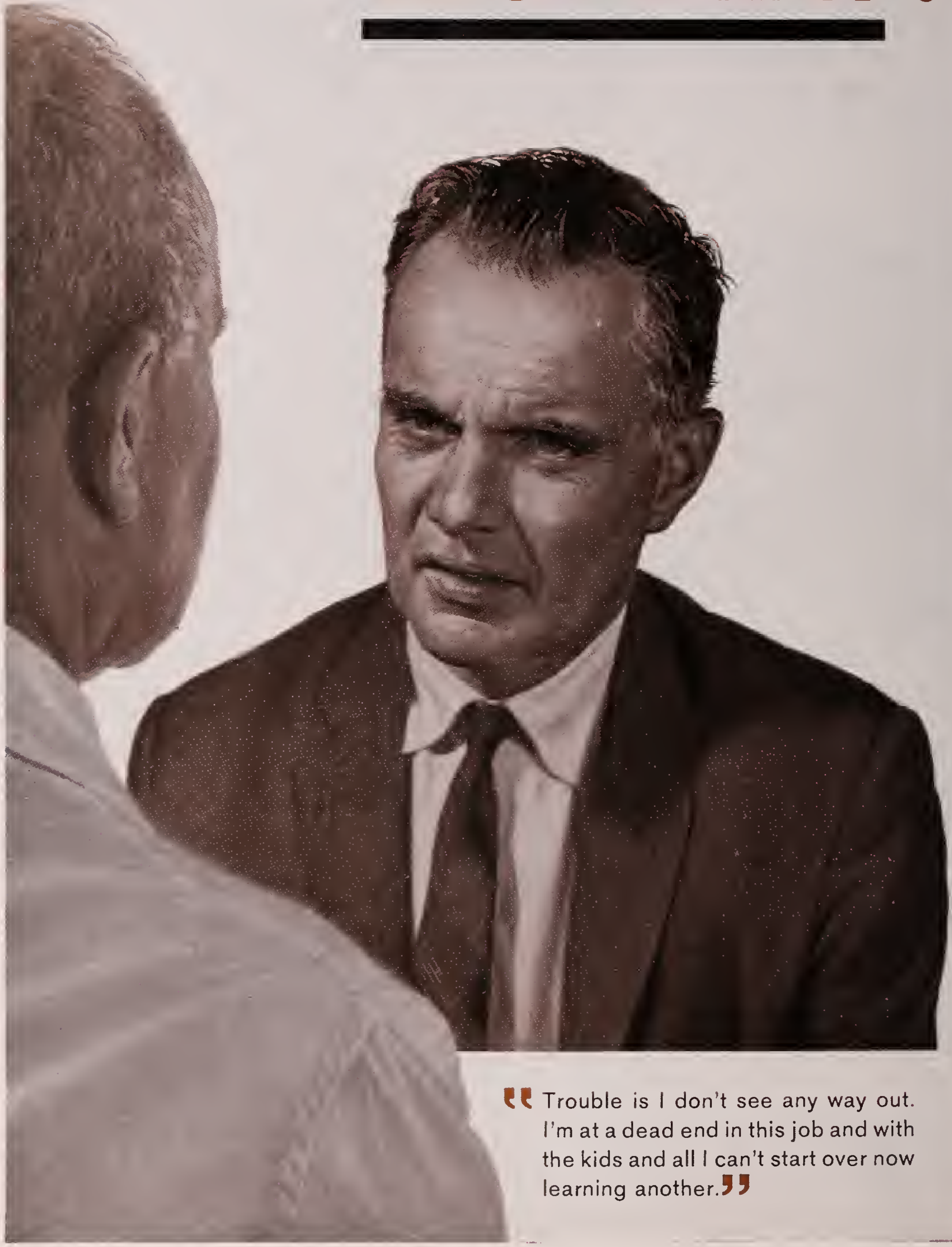

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CORRESPONDENCE

This department is a forum, provided for free individual expression. Letters are published as received and given little or no editing. Proof is submitted when time permits, before publication. Responsibility for statements rests with the authors of these communications and not with this journal which strives only to protect the right of individuals to speak for themselves. Ed.

TEPP Emergency is 48 Hours

EDITOR, NORTHWEST MEDICINE:

I'm sorry to report that in the typing of "Dusting with Tetraethylpyrophosphate" our typist made a mistake which escaped my attention. On page 856 the 10th item that physicians should keep in mind should have read "The acute emergency lasts 24-48 hours and the patient should be watched continuously during this time."

Sincerely,
BERNARD BUCOVE, M.D.
State Director of Health
Olympia, Washington

AMA Tetanus Campaign

EDITOR, NORTHWEST MEDICINE:

The American Medical Association is establishing an intensive and continuing campaign to improve the immunization of the American people against tetanus. This program was started in September 1963, and consists of public and professional education urging the public to get, and renew, inoculations with tetanus toxoid.

Tetanus is completely preventable. The armed services, who provide tetanus immunization routinely, rarely have a case. During recent years an average of 400 cases annually have occurred in the United States. About 60 per cent of those afflicted have died. All of these deaths were unnecessary.

The death rate from tetanus is highest among young children. Emphasis therefore should be placed on inoculating them in infancy. Usually this is done with triple vaccine, including diphtheria and whooping cough along with tetanus toxoid. Three injections four weeks apart, and a booster dose within 6 to 12 months, will establish immunity.

After immunity has been established, everyone should maintain protection by booster doses every five years, and a similar booster dose after any injury that might introduce the infection. If immunity has not been established in infancy, an original series of three injections should be given at any age, and similarly followed by booster doses.

Tetanus toxoid is an extremely effective preventive, and it is not known to produce serious side effects. Tetanus antitoxin, on the contrary, occasionally produces serious reactions in people allergic to horse serum. It is now used only for treatment of persons who have failed to get advance inoculations with toxoid. Both tetanus and the danger of allergic reactions can be avoided by preventive inoculations with tetanus toxoid, before injury.

Even trivial puncture wounds permit the entrance of *Clostridium tetani.* It is commonly found in soil. Out-door living, gardening and sports make everyone eligible for infection. *Cl. tetani* is anaerobic. This is why puncture wounds particularly, provide conditions favorable for its growth. Automobile accidents and the disasters for which we prepare in civil defense also produce injuries subject to tetanus contamination. Immunization with tetanus toxoid before injury is the only effective protection.

Many adults are unaware of their need for periodic booster shots. Each physician should urge his patients to be immunized and to renew protection against tetanus regularly. A high level of immunity in the population can reduce the present needless occurrence of deaths from tetanus. The American Medical Association urges medical societies and appropriate health agencies to accelerate their efforts in the prevention of tetanus.

Sincerely,
F. J. L. BLASINGAME, M.D.
Executive Vice President
Chicago, Illinois

Questionnaire Coming

EDITOR, NORTHWEST MEDICINE:

The Industrial Insurance Committee of the Washington State Medical Association is preparing an extensive survey of the physicians of Washington State to ascertain their feelings regarding the Department of Labor and Industries Rules and Fee Schedule. This project is being undertaken to arrive at an equitable fee schedule for the doctors and to improve their working relationship with the Department.

It is of the utmost importance for all doctors to take the time to answer the questionnaire which will be mailed to them in order to give your Committee an idea of your feelings about rules and present fees. You will be asked to review the fees and make suggestions as to what you feel the fees should be for each service which you render. You are urged to pay particular attention to the procedures which you do most frequently.

Also, you will be asked to let your Committee know which items and fees or sections of the present fee schedule you feel should be eliminated. It is imperative that all doctors study the questionnaire carefully, and take the time to fill it out and return it. The Committee needs your help in determining these fees so that they can have your backing in preparing a fee schedule that can be used as a basis for annual review with the Department of Labor and Industries.

PLEASE MAKE A SPECIAL EFFORT TO ANSWER THE QUESTIONNAIRE. It is anticipated the questionnaire will be mailed the first of the year.

Sincerely,
EDWARD F. CADMAN, M.D.
Chairman
Industrial Insurance Committee

Men of Science Should Not Be Monolingual

EDITOR, NORTHWEST MEDICINE:

Allow me to commend you for giving us Spanish abstracts for articles as published in NORTHWEST MEDICINE. For any of us who are trying to gain a little better knowledge of Spanish these abstracts are very useful. We Americans generally are quite deficient in our ability to use and understand foreign languages. Anything that will stimulate men of science to correct this deficiency is certainly worthwhile.

Yours sincerely,
S. F. HERRMANN, M.D.
707 Medical Arts Building
Tacoma, Washington

In Defense of Dr. Fritz

The following letter is published as received in accordance with the statement (p. 931) on purpose of this department. We take heart from the evidence provided here, in the letter from Dr. White, and the article by Dr. Fritz, that individualism is not dead. We are personally acquainted with the three physicians concerned and have the highest possible regard for all three. We are, however, able to recognize certain significant differences in temperament and characteristics. Indeed, it would be difficult to find three men less alike, except in one shared quality of transcendant importance. Each has the courage to face the target of his remarks and say what he thinks. It would be a better world if there were more men with this kind of strength.
Ed

EDITOR, NORTHWEST MEDICINE:

Undoubtedly your space devoted to 'Vox Pop' could be filled a thousand times over, but naturally there has to be some space for advertising. However, the diatribe leveled at Dr. Fritz certainly shouldn't go without comment by someone if only by the SPCA.

I am not acquainted with L. A. White, M.D. (as he calls himself) nor have I any burning desire to

continued on page 935

Coca-Cola, too, is compatible with a well-balanced menu. As a pure, wholesome drink, it provides a bit of quick energy..brings you back refreshed after work or play. It contributes to good health by providing a pleasurable moment's pause from the pace of a busy day.

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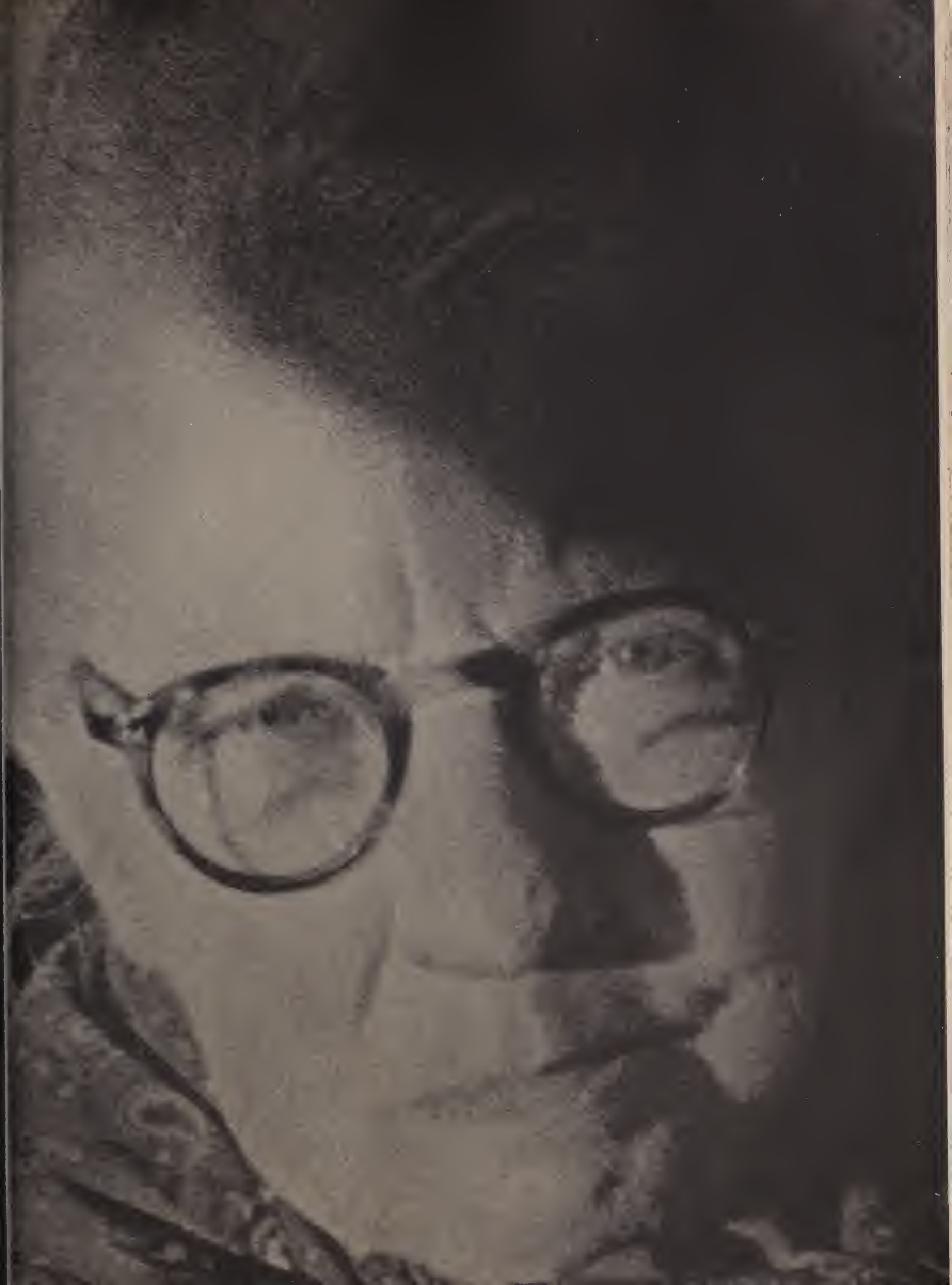

the intruder...
and the resentful family

victims of
"communicable"* anxiety

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The tension generated by the emotionally disturbed patient cannot fail to have a detrimental effect on the emotional well-being of the entire household. Consequently, more than one member of the family may require the relief that Atarax (hydroxyzine HCl) provides. Because it has such a wide therapeutic latitude and is so well tolerated, it can be administered to patients of any age for prolonged periods without serious side reactions or loss in effectiveness.

*Literally, of course, anxiety is not "communicable" as the word is commonly used, but you probably see many patients whose emotional disturbances are transmitted to and reflected in the people who are closest to them.

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Side effects and precautions: No serious side effects have been reported and confirmed in the administration of Atarax (hydroxyzine HCl) to date. Therapeutic doses seldom impair mental alertness. If drowsiness occurs, it is usually transitory and may disappear in a few days of continued therapy or with reduced dosage. Dryness of the mouth may be encountered at high doses. Involuntary motor activity not unlike that seen with high doses of other psychotropic agents has been reported in some hospitalized patients on high dosages of hydroxyzine HCl, although continuous therapy with one gram daily has been employed in some patients without encountering this effect. In some patients receiving anticoagulant therapy concurrently with this tranquilizer, the anticoagulant requirement may be decreased; patients receiving both drugs should be followed closely and appropriate laboratory studies performed regularly. The potentiating action of hydroxyzine HCl is mild, but must be taken into consideration when it is used in conjunction with central nervous depressants.

Oral dosage for adults: Range: 25 mg. t.i.d. to 100 mg. q.i.d. Recommended dosage: 100 mg. to 150 mg. daily in divided doses, depending on severity of symptoms and patient response. **Oral dosage for children:** 6 years and under, 50 mg. daily in divided doses; 6 years and over, 50-100 mg. daily in divided doses.

Supplied: Syrup (hydroxyzine HCl 10 mg per 5 cc.; ethyl alcohol 0.5% v/v) in pint bottles. Tablets (hydroxyzine HCl 10 mg. and 25 mg.) in bottles of 100 and 500; (hydroxyzine HCl 50 mg. and 100 mg.) in bottles of 100.

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continued from page 932

become very close to anybody, especially a Physician, who would stay in the office of "Indian Affairs" *anywhere* for 8 years. Any recent graduate might have gotten himself so involved, but after a year or two the 'medical amniotic fluid' should have dried on his ears and kept him from whiling away approximately 1/5th of his medical life so notoriously. It's a little surprising too, after 8 bitter years in Alaska, L. A. White, M.D.'s skin didn't get a little thicker.

But enough of this; Dr. Fritz doesn't need anybody to come to his defense but one is nevertheless tempted to suggest that if that apple-box full of adenoid tissue had been more carefully removed who knows but maybe L. A. White would like Dr. Fritz and think more highly of a T & A.

Sincerely,
EUGENE F. MCELMEEL, M.D.
Seattle, Washington

Fluoridation

EDITOR, NORTHWEST MEDICINE:

I wish to congratulate you on your fine editorial in the September issue on chronic fluoride poisoning. As far as I know, no other medical publication has taken the stand on fluoridation that you have.

Every doctor knows (or should know) that fluorine is a dangerous poison. Your quotes from a French and a South African medical journal certainly confirm this. The fact that these findings have not been reported or confirmed in the United States only shows that there is a conspiracy of silence in this country about the bad effects of fluorine. At least, you, through your journal, are informing the medical profession of the Northwest so that they will not allow this dangerous chemical to be added to our water supplies.

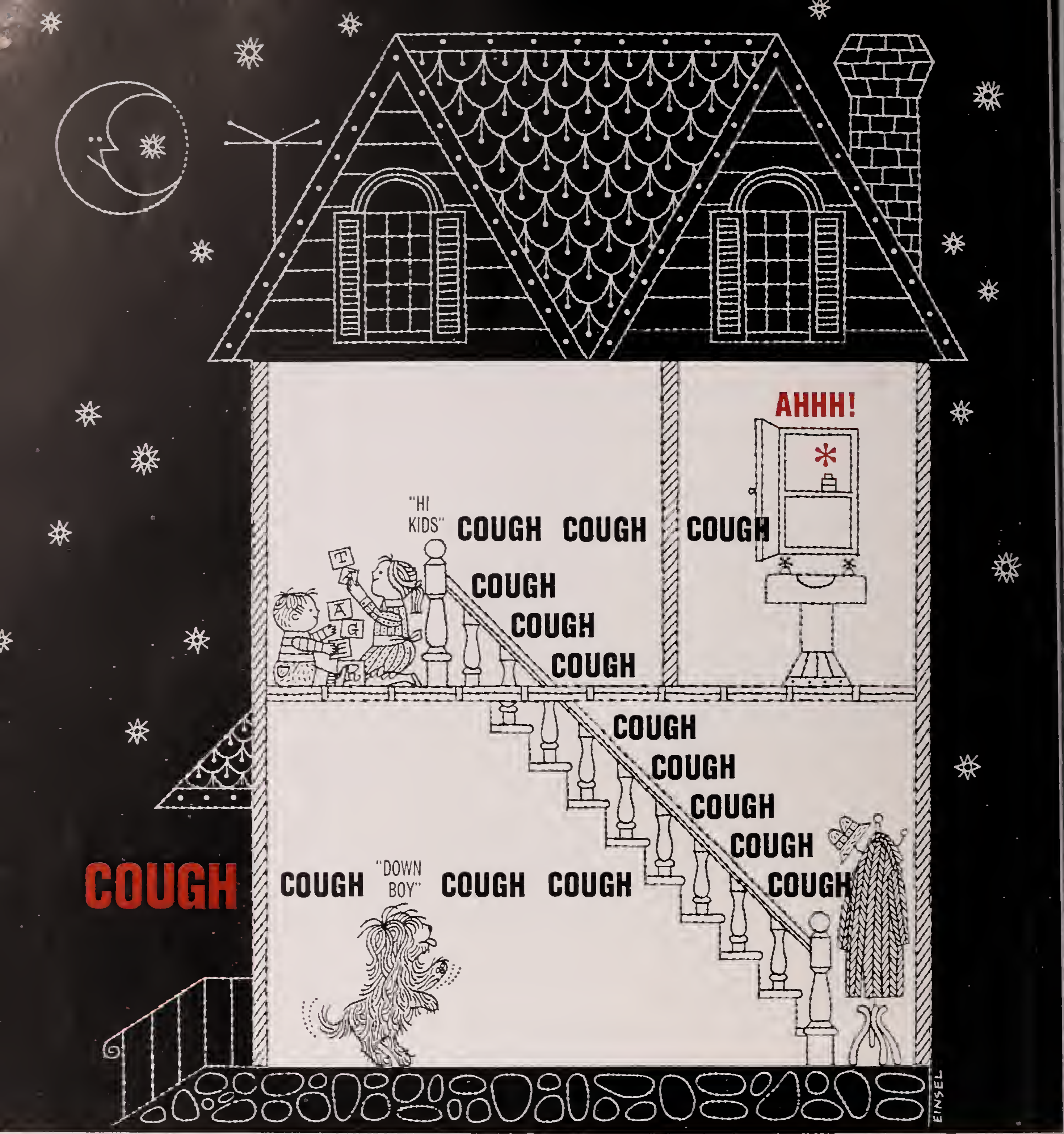
It is a sad thing to contemplate that the water supply of 26 per cent of the population of the United States now contains noxious amounts of this harmful drug.

Would it not be worthwhile to send a copy of your editorial to members of our allied professions, the chiropractors and naturopaths? We know that they are on our side in this fight. Also the pharmaceutical manufacturers should be warned, as they are starting to add it to vitamins.

I am sure that in future years, the generation now growing up in our part of the country will thank you for your fight.

Yours very truly,
WARREN A. KADAS, M.D.
Sutherlin, Oregon

We are waging no particular campaign for or against fluoridation but have always offered to publish material on either side of the issue. Absence of scientific articles or letters promoting fluoridation of public water supplies merely indicates failure of supporters to communicate. Ed



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BRIEF SUMMARY / *Indications:* Dimetane Expectorant and Dimetane Expectorant-DC are indicated for relief of cough in allergic states and acute U.R.I. *Side Effects:* Mild drowsiness associated with brompheniramine maleate may occur infrequently. Some rare patients are sensitive to codeine. *Precautions:* Administer with caution in the presence of cardiac or peripheral vascular diseases and hypertension. *Contraindications:* Antihistamine sensitivity. Not recommended for use during pregnancy.

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Cautions: Severe mental depression has appeared in a small percentage of patients, primarily in a dosage above 1 mg. daily. Usually the patient had a pre-existing, incipient, endogenous depression which was unmasked or accentuated by reserpine. When the drug is discontinued, depression usually disappears, but hospitalization and shock therapy are sometimes required. Daily dosage above 0.25 mg. is contraindicated in patients with a history of mental depression or peptic ulcer. Withdraw Serpasil (reserpine) 2 weeks before surgery, if possible. For emergency surgical procedures, vagal blocking agents should be given parenterally to prevent or reverse hypotension and/or bradycardia.

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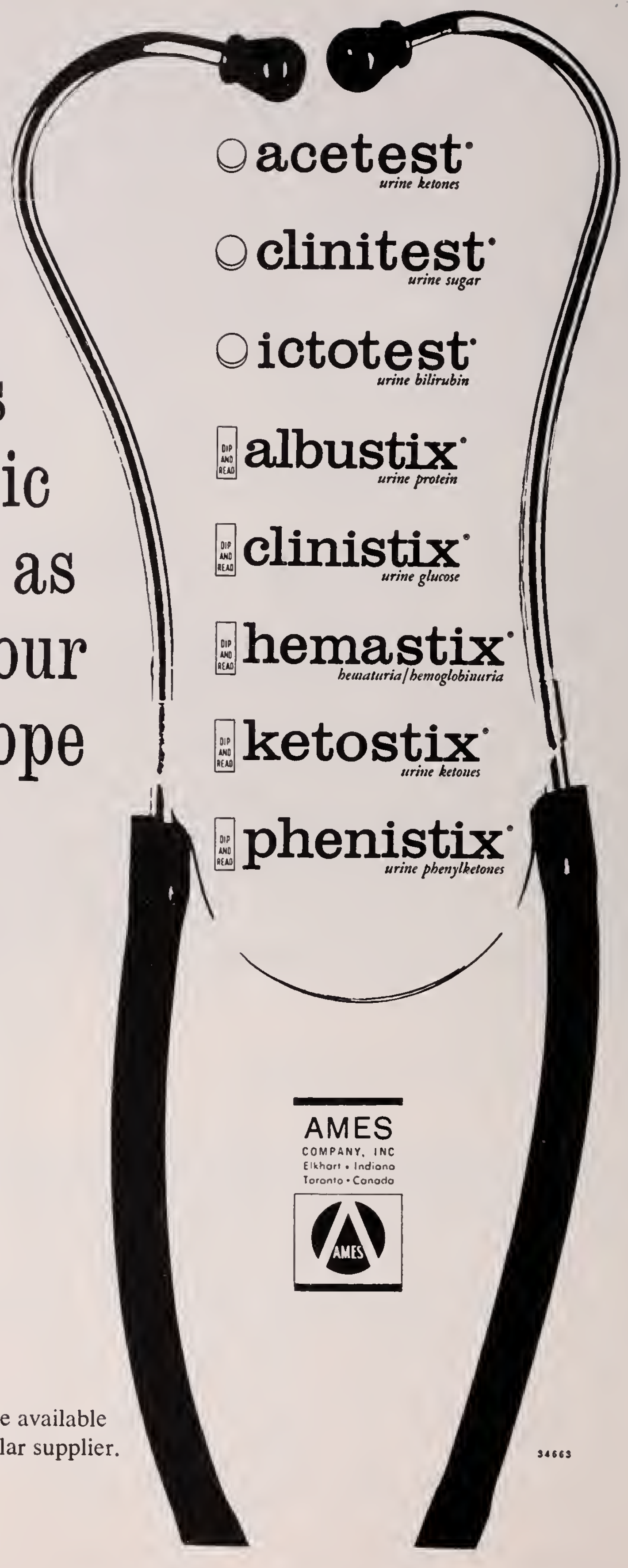

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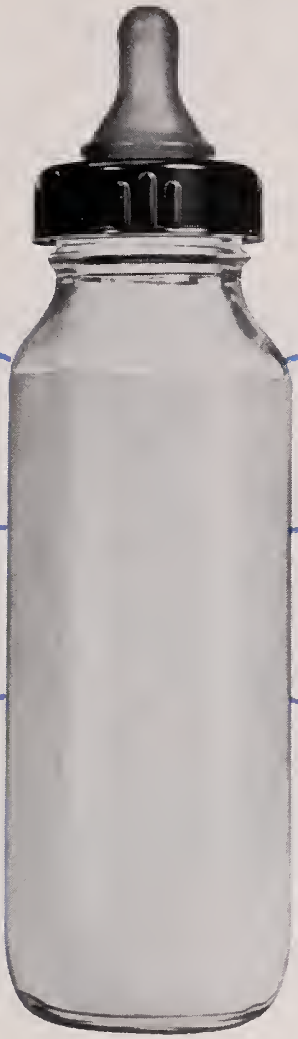

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Dosage and administration: Oral—10 to 20 mg. (1 to 2 tablets) t.i.d. or q.i.d.; I. M.—5 to 10 mg. b.i.d. or t.i.d. *Contraindications:* There are no known contraindications to oral administration in recommended doses. *Cautions:* Do not give immediately postpartum or in the presence of arterial bleeding. Parenteral administration not recommended in the presence of hypotension or tachycardia. Avoid intramuscular doses above 10 mg. *Side effects:* Occasional palpitation and dizziness usually controllable by dosage adjustment. Brief hypotension or tachycardia may occur with intramuscular doses of 10 mg. or more.

For complete details on indications, dosage, administration, and clinical background, see the brochure of this product available on request from Mead Johnson Laboratories, Evansville 21, Indiana.

References: (1) Blouin, L., and Overman, R. R.: Detailed reports in Mead Johnson Research Files.* (2) Gloning, K., and Klausberger, E. M.: Wien. klin. Wchnschr. *70*:145-149 (Feb. 28) 1958. (3) Whittier, J. R., and Dhrymiotis, A. D.: Angiology *13*:324-327 (July) 1962. (4) Horton, G. E., and Johnson, P. C., Jr.: The Application of Radioisotopes to the Study of Cerebral Blood Flow and the Effects of Isoxsuprine (to be published). (5) Dhrymiotis, A. D., and Whittier, J. R.: Current Therap. Res. *4*:124-129 (April) 1962. *Available upon request from Mead Johnson Laboratories, Evansville 21, Indiana.

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Research in the Service of Medicine

guest editorial: *The Menopause is Obsolete*

ROBERT A. WILSON, M.D., Robert A. Wilson Research Foundation, Inc.
New York, New York

A girl becomes a woman when estrogen and progesterone arrive. When they depart, she is a woman by courtesy only—in reality a castrate.

The favorable metabolic effects of estrogen and progesterone on every body cell are not fully realized. Estrogen improves cell permeability and regulates the supply of micronutrients, enzymes, glucose, minerals, and water. Progesterone, while primarily catabolic, is definately needed for balanced cell metabolism. Both are essential for homeostasis.

The effects of estrogen and progesterone deficiency are so completely documented that to list them would be repetitious. Menopausal women are not normal; they suffer from a deficiency disease with serious sequelae and need treatment.

Removal of the ovaries and uterus in women in the twenties and thirties is sometimes necessary and denying them *full* hormonal replacement is the rule rather than the exception—a form of medical barbarism. This is also true when the denial is in the forties or fifties, and even later. Although the insult decreases with age, every cell is adversely affected. If there is to be denial —a cut-off point—at what age is it to be? Who is to decide this? On what research is it to be based?

When the thyroid weakens with age, replacement therapy, continued indefinitely, causes no concern; this applies to the pancreas and adrenals too. But when the gonads fail at the menopause a different philosophy prevails— "Don't interfere with nature."

Precise diagnosis and treatment is the rule when ovarian failure occurs in the twenties or early thirties, yet after about age 35 this is seldom the case. Failure is attributed to early menopause and there is a loss of therapeutic interest. The patient is told to expect amelioration and preparation for future adjustment, but not cure.

About ten per cent of women maintain a high estrogen titer as late as age 60. One of these visits her gynecologist. After examination, plus an analysis of the vaginal smear, he compliments her on her perfect condition—her high estrogenicity. A few days later he is visited by her twin sister with atrophic breasts, senile vaginitis and many bizarre symptoms of the menopause. Finding a low cornification index, he reluctantly prescribes estrogen in low dosage, and a tranquillizer, "to tide her over this trying period." She immediately challenges him, "Logically, Doctor, my estrogen level must be elevated to that of my sister or you must reduce her level to mine. You cannot have it both ways."

Replacement therapy with both hormones presents few problems when the ovaries and uterus have been removed. If the ovaries are removed, or functionally dead, but the uterus is intact, cyclic replacement therapy will result in withdrawal bleeding. This cannot be dispensed with because of the systemic metabolic effects of progesterone in addition to its needed target action on the perilobular and alveolar tissues of the breasts. This bleeding prevents endometrial hyperplasia. Endometrial cancer may be inhibited, or even cured, by progesterone and its derivatives.[1] Early in-situ endometrial cancer is surely restricted from further invasion by the wholesale destruction of surrounding tissue and its subsequent lavage of rhythmic bleeding.

If steroid hormones remained in their glands of origin they would be useless to body economy. Target or any other cells do not care where their estrogen and progesterone originate. Fundamentally the gonads are pharmaceutical laboratories; when the ovaries close up shop, the soma is quite content to receive its steroids from the corner drug store.

The percentage of superficial cells in the Papanicolaou smear is a valuable tool in estimating estrogen deficiency—"treat the smear."

The daily ingestion of a tablet represents the essential difference between a life partly lived or a full one—a body and mind of multiple divisions, or homeostasis, the complete woman. One of our best known and loved professors recently said, "Something must be done for these poor women." The menopause became as obsolete as the bow and arrow the day potent oral progestogens were born.■

Permission to publish simultaneously granted by **Connecticut Medicine**. The December, 1963, issue of that journal also carries this editorial.

REFERENCE

1 Wilson, R. A., The roles of estrogen and progesterone in breast and genital cancer, J.A.M.A. 182: 327-331, (October 27) 1962.

McCarthy and Finland[1] demonstrated that V-Cillin K is well absorbed *even in the presence of food.* No nonabsorbers have ever been found. Thus, whether taken before or after meals, V-Cillin K provides consistently dependable clinical results.

Indications: V-Cillin K is an antibiotic useful in the treatment of streptococcus, pneumococcus, and gonococcus infections and infections caused by sensitive strains of staphylococci. **Precautions:** Although sensitivity reactions are much less common after oral than after parenteral administration, V-Cillin K should not be administered to patients with a history of allergy to penicillin. As with any antibiotic, observation for overgrowth of nonsusceptible organisms during treatment is important. **Dosage:** The usual dosage range is 125 mg. three times daily to 250 mg. every four hours. **Supplied:** Tablets V-Cillin K, 125 or 250 mg. (scored), and V-Cillin K, Pediatric, 125 mg. per 5-cc. teaspoonful, in 40, 80, and 150-cc.-size packages.

1. McCarthy, C. G., and Finland, M.: Absorption and Excretion of Four Penicillins, New England J. Med., *263:*315, 1960.

Additional information available upon request. Eli Lilly and Company, Indianapolis 6, Indiana.

V-CILLIN K® PROVIDES CONSISTENTLY DEPENDABLE CLINICAL RESULTS
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Radioactive Mercury Brain Scan

Clinical Appraisal of 260 Cases

GORDON D. LaZERTE, M.D./LAWRENCE M. KNOPP, M.D. Seattle, Washington

In 1961, we decided to evaluate the radioisotope brain scan at St. Frances Xavier Cabrini Hospital, Seattle, for the diagnosis of intra-cranial lesions, concentrating on one isotope technique.[1] We performed our first scans in the spring of 1962 and, after early favorable experience, used the test with increasing frequency so that after a little more than one year's experience we are able to report on 260 cases. We have followed the clinical course of all these patients, and have lost track of none of them. Even though it is obviously too soon for the definitive diagnosis to be established in every case, there is abundant evidence that the test is both valuable and harmless. We offer this paper in the belief that its background and performance should be more widely known.

The most reliable pre-existing techniques for delineating lesions of the brain have involved introducing large amounts of iodinated compounds into the major arteries of the brain, or air into the fluid spaces, in order to provide roentgenographic contrast. As these techniques have become refined, brain tumors and operable vascular lesions have been identified earlier and the results of neurosurgical treatment have become increasingly more hopeful. In order to accelerate this trend there have been many efforts to identify intra-cranial lesions by simpler techniques with less morbidity than contrast studies, so that diagnosis could be made even earlier in the course of these lesions. It is well known that in some parts of the brain, lesions may attain considerable size before producing defi-

abstract

LAZERTE, G. D., L. M. KNOPP (St. Frances X. Cabrini Hospital, Seattle, Washington, U.S.A.) Radioactive mercury brain scan. Northwest Med. 62:945-950 (Dec) 1963.

In a series of 260 patients the radioactive mercury brain scan demonstrated clearly 40 of 47 brain tumors. Of the five tumors missed completely, two were in the pons and two were in the pituitary. The scan was equivocal in one patient with acoustic neurinoma and in another case with meningeal carcinomatosis. The radiation exposure to the patient is reported to be 0.3r to the body generally, and 50r to the kidney where the isotope is concentrated. These are innocuous levels, but their possible genetic significance should be borne in mind when dealing with children and young adults. There is no morbidity from the test. It is a simple outpatient procedure in which the patient merely receives an intravenous injection of 5 to 7 mg of chlormerodrin (less than the amount in one-half tablet of Neohydrin) tagged by substituting Hg^{203} *for ordinary mercury. The authors consider the radioactive brain scan to be the single most important aid to the clinical diagnosis of brain tumor.*

abstracto

LAZERTE, G. D., L. M. KNOPP (St. Frances X. Cabrini Hospital, Seattle, Washington, U.S.A.) Radioactive mercury brain scan. Northwest Med. 62:945-950 (Dec) 1963.

En una serie de 260 pacientes, el escintilograma del cerebro reveló claramente 40 entre 47 tumores cerebrales. De cinco tumores no detectados, dos estaban en la protuberancia y dos estaban en la hipófisis. El escintilograma fué dudoso en un paciente que tenía una neurinoma acústica y en otro con carcinomatosis meningea. La exposición radioactiva del paciente se dice que es de unos 0,3 r al cuerpo en general y 50 r a los riñones, lugar en que el isotopo se concentra. Estos niveles son innocuos pero sus posible significación gentica debe ser tomado en consideración cuando se trata de niños o adultos jóvenes. El test mismo no tiene morbilidad ninguna. Es un procedimiento sencillo, que puede hacerse en pacientes ambulatorios. Consiste en la inyección intravenosa de cinco o siete mg de clormerodrin (menos que la cantidad contenida en la mitad de una tableta de Neohydrin) "marcado" por la substitución del Hg por Hg^{203}*. Los autores consideran el escintilograma del cerebo como la ayuda mas importante de que se puede disponer en el dignostico clinico de los tumores cerebrales.*

nite signs and symptoms, yet the available, reliable techniques of diagnosis have had in themselves sufficient morbidity that they could not be applied, except when there was reasonable clinical assurance of finding a lesion. The only really innocuous procedure, the electroencephalogram, has left much to be desired in the diagnosis of brain tumors.

A number of different techniques using radioisotopes have been devised for demonstrating brain lesions, but only recently has one of these proven to be both effective and reasonably simple to perform. This is the technique announced by Blau and Bender[1] in June 1960 at the meeting of the Society of Nuclear Medicine. This work was confirmed shortly thereafter by Brinkman and his associates at the University of Michigan.[2] In this paper we shall review briefly the principles involved in brain scanning, and present our results.

differential barrier

In developing an isotope brain scanning technique, the first requirement is to find an innocuous substance which will enter selectively into the tumor or other lesion, and not enter normal brain tissue. Neurophysiologists have shown there there exists in blood vessels of the brain a barrier which prevents free diffusion of many substances, such as bilirubin and penicillin, from the blood into the tissue of brain, substances which diffuse readily into other tissues. The vessels of most tumors do not have this barrier, consequently they permit free diffusion of these molecules into the lesion, though some low-grade astrocytomas may prove to be exceptions. There is a choice of molecules which may be used to exploit this difference between tumor tissue and normal brain tissue and, in fact, several molecules have been tagged with a radio-nuclide and used with varying degrees of success. Our experience is limited to one of these, chlormerodrin (Neohydrin).

basis of the test

In addition to having proper characteristics with respect to the blood brain barrier, it has the additional advantage of being cleared from the blood by the kidneys, thus reducing the general tissue background, particularly in the regions of the large intracranial vessels. Since this synthetic organic mercurial diuretic has been in general use for some time its physiologic effects are known and predictable. Only 5 to 7 mg. of chlormerodrin is used in the average scan.

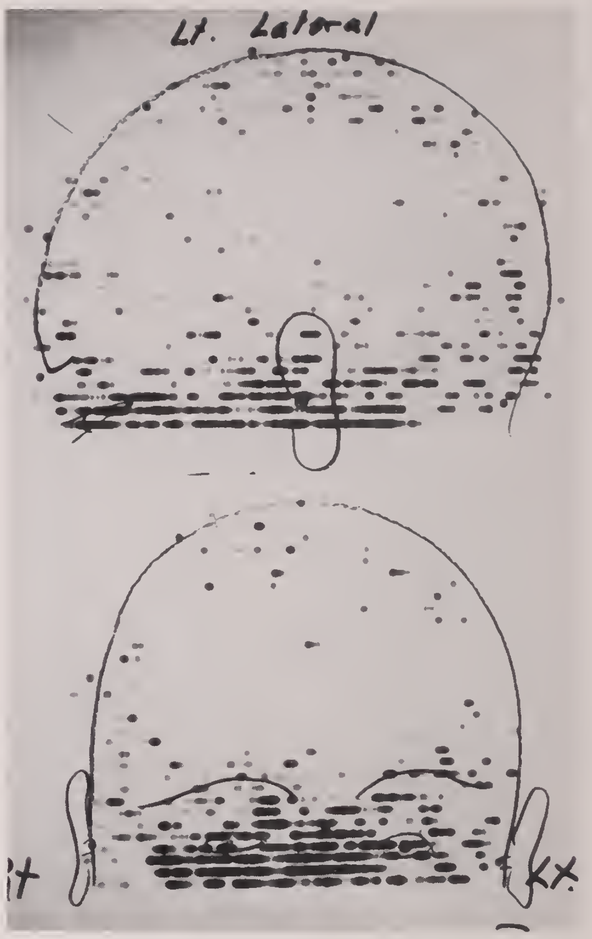

Fig. 1. Normal

When manufactured for radioistope diagnostic purposes, the isotope Hg^{203} is substituted for ordinary mercury (a mixture of Hg^{198} through Hg^{202}). This radioactive isotope of mercury has a single peak of gamma energy emission at .28 mev and has a half life of 45.8 days. Since the isotope accumulates in all tissues outside the central nervous system proper, a scan of the whole body would show a positive image representing isotope concentration except for a bubble of lesser concentration corresponding to the brain. Lesions which lie in this bubble can be demonstrated by the radioisotope scan. A normal scan is illustrated in figure 1.

Once a molecule tagged with a radio-nuclide has localized within a lesion of the brain, the technique of delineating it becomes similar to that of making scintiscans of the thyroid and liver. It is not our purpose to review the technical problems involved, but we do wish to point out that there is less marked concentration of this isotope in brain lesions than there

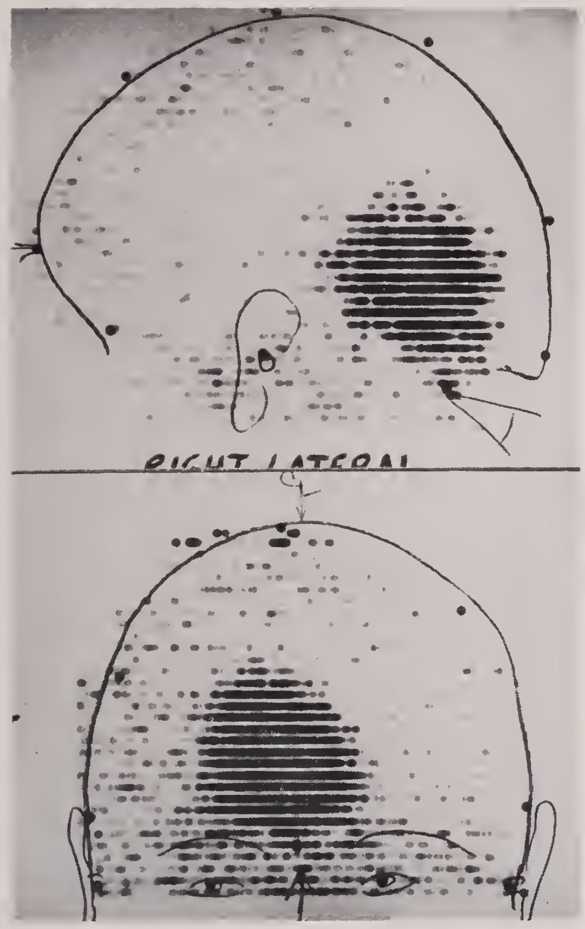

Fig. 2. Meningioma

is concentration of iodine in the thyroid or Rose Bengal in the liver, and hence more refined equipment is required to bring out the necessary contrast.

results

Results of our experience with 260 scans are tabulated in chart 1. Of the cases reported as negative on the scan, particular attention must be paid to the five which subsequently proved to have brain tumors. Two of these tumors proved to be in the pons. Review of the normal scan in figure 1 shows why lesions of the pons may be missed by this technique. The pons, as well as the rest of the brain stem, lies encased in bone and thick layers of soft tissue which take up the isotope so that the lesions cannot be outlined against this background unless they take up an exceptional amount of the isotope. Two other cases which were missed proved to be cystic tumors of the pituitary. It can be seen that lesions of the pituitary, like those of the brain stem, may be lost in the surrounding high background activity. Plain films of the skull probably provide more useful information about lesions of the pituitary than can be learned from the brain scan.

Chart 1
Analysis 260 brain scans

188 Negative scans	5 Tumors* 5 Vascular accidents 178 No organic lesion
19 Doubtful scans	2 Tumors** 2 Vascular accidents 15 No organic lesion
53 Positive scans	4 Chronic subdural hematomas 40 Tumors 6 Vascular accidents 3 Still under observation 0 No organic lesion

* 2 Cystic tumors of the pituitary
1 Glioblastoma
2 Gliomas of pons
** 1 Acoustic neurinoma
1 Meningeal carcinomatosis

The fifth case proved to be a glioblastoma lying in the parietal region, a spot where lesions are usually readily demonstrated in the scan. At the time of the examination a brain tumor was suspected strongly, so bilateral carotid and vertebral arteriograms were performed as well as a scan. All of these were negative and the patient was treated medically for the convulsions which brought this middle-aged woman to the doctor.

Six months later she had a sudden massive cerebral vascular accident and died soon thereafter. Autopsy showed a large intra-cerebral hemorrhage with a nodule of tumor histologically identified as glioblastoma multiforme measuring 3 cm in diameter near the center of the hemorrhage. The extent and even the existence of this lesion at the time of the scan six months earlier remain speculative.

Most of the doubtful scans proved to be insignificant. The two tumors in this group were an acoustic neurinoma and an example of meningeal carcinomatosis without any discrete, large nodule.

The patients with positive isotope scans all proved to have organic lesions of the brain though at the time of this writing three of them have not been finally diagnosed. The most dramatic isotope concentrating lesions were the tumors, examples of which are shown in figures 2, 3 and 4. Figure 2 is the scan of a middle-aged lady who complained only of spells of "lightheadedness." She was known to have arteriosclerotic heart disease with angina pectoris, and her symptoms could have been attributed to cerebral ischemia. But a brain scan was ordered as a screening procedure. The tumor proved to be an olfactory groove meningioma. Other tumors demonstrated by the scan include oligodendroglioma, glioblastoma (Fig. 3), hemangioblastoma (Fig. 4) and metastatic carcinoma. We have not encountered any low-grade or cystic astrocytomas in this series, so we are unable to predict how well this technique will show these tumors.*

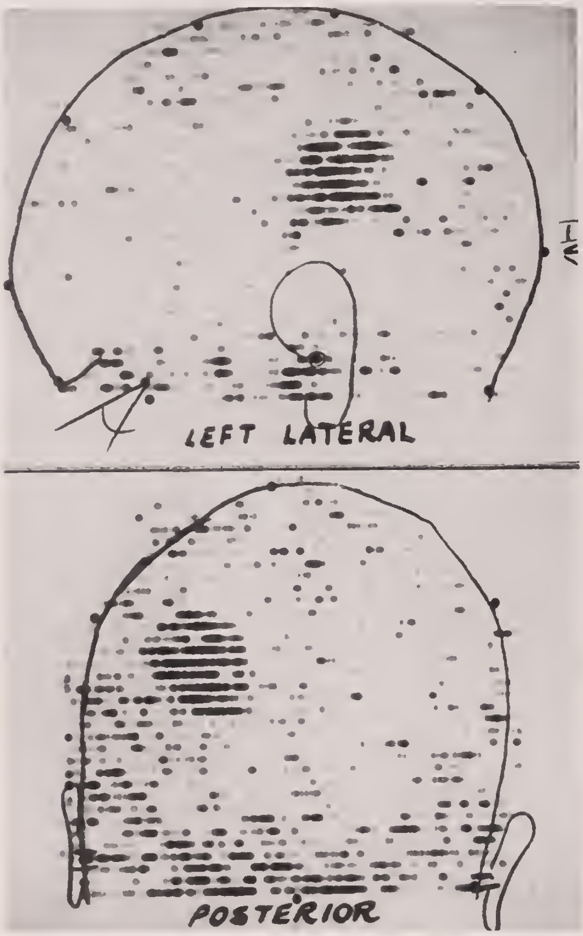

Fig. 3. Glioblastoma

vascular lesions

About half of the scans on patients with vascular occlusion were negative. The positive scans showed a lesser degree of isotope concentration than most of the tumors with the distribution of the increased activity corresponding well with the anatomic distribution of the vessels involved. In some cases we were able to follow the patient clinically and repeat the scan at a later date, showing complete resolution of the area of isotope concentration. We have concluded that ischemia due to arterial occlusion causes temporary breakdown of the blood brain barrier in the affected zone. Evidently there is sufficient circulation at the periphery of the infarct for the isotope to reach this area, and to leak through vessels damaged by anoxia. A typical scan is shown in figure 5, two weeks after occlusion of a branch of the right middle cerebral artery.

The subdural hematomas in this series were all of two weeks or more duration, and they were readily demonstrated on the scans, figure 6. Distribution of these lesions, spread superficially over a large part of the affected hemisphere, suggested subdural hematoma in each case. The best explanation for the isotope concentration probably lies in the vascular granulation tissue membrane which forms around these collections

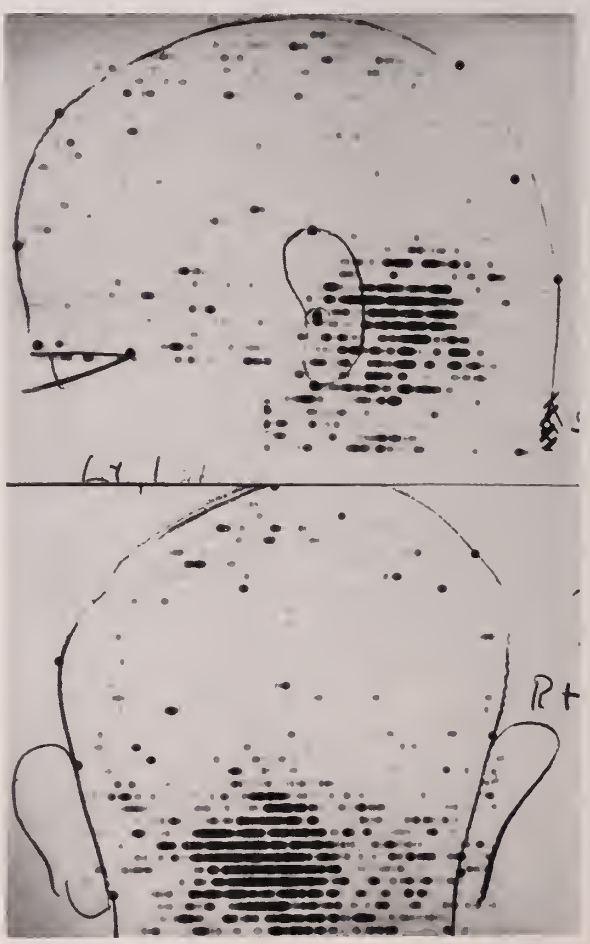

Fig. 4. Hemangioblastoma

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*This proved to be a prophetic reservation. Among the new cases we have scanned beyond the first 260 reported here, we have seen two more patients with brain tumors which did not show on the scans. One of these was a malignant glioma consisting of a large fluid-filled cyst surrounded by a 1 cm shell of tumor. The other tumor proved to be an astrocytoma of the thalamus.

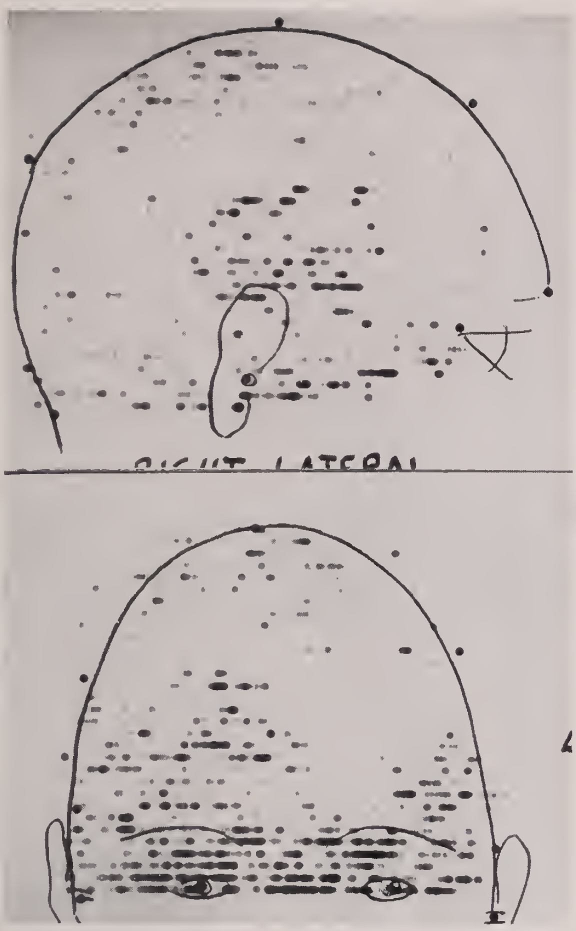

Fig. 5. Infarct

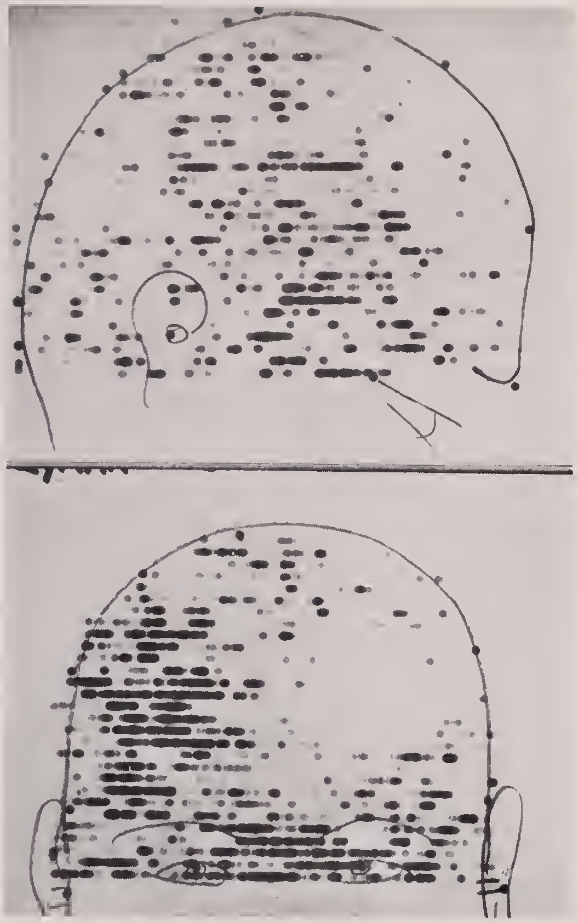

Fig. 6. Subdural Hematoma

of blood. The scan shown in figure 6 proved decisive in management of the patient, for he was an elderly man who previously had had a stroke with left hemiparesis. There was not a clear-cut history of injury, and the lateralizing signs, superimposed as they were on his old deficit, left considerable doubt whether or not there was a new pathologic process going on in the brain. The scan provided the answer, and 250 cc of old blood was removed.

We have had no mortality and no morbidity from this test. There is no discomfort and the patient need not be hospitalized. We may anticipate an occasional patient being sensitive to mercury compounds, but the dose which we use for the scan (0.5 mm or less) is no more than the amount usually given for a sensitivity test dose. The most serious precaution to be observed in the use of the brain scan relates to radiation exposure. Estimates of the total dose vary, but the original authors agree that the total whole body dose is about 0.3 r.[1,2] The dose to the kidneys, where the isotope is more concentrated than it is in the brain, may range as high as 50 r, a dose comparable to that delivered to the thyroid for scanning of that organ. The dose to the kidneys can be reduced to a fraction of this value by administering 1 cc of ordinary "cold" mercurial diuretic 24 hours before administration of the radioactive material. This routine accelerates the passage of the isotope through the kidney, and in no way effects the quality of the scan. The levels of radiation delivered by this procedure are very far below those capable of producing tissue damage, but in view of the possible genetic effects of radiation we have urged that the test be used with greater selectivity in young subjects.

comment

Our experience with the isotope brain scan indicates that it is very helpful in the diagnosis of intracranial tumors. There are those who feel that this technique represents a largely unnecessary refinement of already adequate means of diagnosis. Our experience refutes this opinion.

The scan is an outpatient procedure which can be used without fear of complications in patients who have minimal and early signs of symptoms. It usually gives more precise information about the size and location of a lesion than the other tests, since it demonstrates the lesions itself rather than a displacement of normal structures. Thus it allows precise, anatomically located cranial flaps for the surgical approach to tumors demonstrated. The scan has demonstrated a few lesions that were missed completely by arteriography and air studies, conversely the scan has missed a few lesions that were demonstrated by the established techniques. Obviously the scan does not replace other procedures but supplements and enhances them. Arteriography is still needed to evaluate the vascular supply and relations of a tumor; air contrast studies are sometimes required to define relationships to ventricles, and the nature of ventricular blocks produced by tumor. It is the scan to which we should look in the future as the best screening method for that large group of patients who are borderline tumor suspects, but in whom the more dangerous contrast procedures would be considered, if at all, with grave deliberation.

conclusions

1. The isotope scan should be used as an initial step in the diagnosis of suspected brain lesions, not as a subsitute for other techniques.

2. Some tumors will not concentrate isotope, and others will yield negative scans by virtue of their location. Therefore, a negative scan should be considered in the light of the clinical picture, and should not be interpreted as ruling out tumor unless a meticulous neurological evaluation has been made.

3. Radiation exposure of the patient is well below the level of tissue damage. The indications for any test involving radiation should be weighed more carefully in children and young adults.

4. The isotope scan is a simple outpatient procedure without morbidity. In our experience it has proven to be the single most important aid to the clinical diagnosis of brain tumor.■

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Terry Ave & Madison St.

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2 Brinkman, C. A., Wegst, A. V., Haynie, T. P., Nasjleti, C. E., Localization of intracranial tumors utilizing Hg203 labeled Neohydrin and the photoscanner, Univ. Michigan M. Bull. 27:221 (July-August) 1961.

Ophthalmologists and Otolaryngologists to Meet

Puget Sound Academy of Opthalmology and Otolaryngology will hold its annual President's Meeting on January 17-18 in the Olympic Hotel, Seattle. Speakers include: Alston Callahan, Birmingham, Alabama; Deane Hartman, Los Angeles; Merrill Reeh, Portland; Oscar J. Becker, Chicago; and David D. DeWeese, Portland. The general topic of discussion will be plastic surgery.

Northwest Society for Clinical Research

The Northwest Society for Clinical Research will hold its next meeting in Vancouver, B.C., on Saturday, January 11, 1964, at the Georgia Hotel. For further information, contact R. E. Beck, M.D.C.M., Northwest Society for Clinical Research, Suite 1110-750 West Broadway, Vancouver 9, B.C.

Physician's Approach to Helping the Child Who is Failing in School

DANIEL A. LAGOZZINO, M.D. Everett, Washington

Most students find school a very satisfying experience. In fact, many find it a challenge. However, the student who is failing or doing poorly in school is neither satisfied nor challenged and, as a result, becomes of concern to himself, to his teachers, and to his parents.

At a time when the paramount task facing educators is to provide a vigorous and effective instructional program, American education is being challenged to expand its educational goal with respect to learning problems of individual students. In a general approach to the total adaptation of the child in the school setting, the respective roles of parent, teacher, school administrator, physician and individuals from related disciplines, in the management of these learning problems, calls for a reasonable and coordinative regimen. This program does well to recognize that "more frequently than is realized, behavior problems affecting learning are of an organic basis. Whether for investigation of such causes or for the determination of the need for medical counseling or psychiatric care, the school should urge the parents to consult the child's doctor."[1]

It is generally conceded that it is the responsibility of parents to provide for total health of their children, that the primary purpose of those employed in the public school system is the formal education of the children entrusted to them, that the role of the physician is to assist in supervision of the child's total health, and, that individuals from the related disciplines can contribute additional perspective in understanding the presenting problem.[2]

procedure

Since recognition of a problem may occur in the home, in the school, or in the physician's office, slightly differing approaches (procedures) are suggested. If the recognition originates in the home, the family concerned may take the matter to the physician or to someone at the school. The procedure to be followed is similar in both instances.

The recommended procedure, a modification

abstract

LAGOZZINO, DANIEL A. (3030 Hoyt, Everett, Wash., U.S.A.) Physician's approach to helping the child who is failing in school. Northwest Med 62:951-953 (Dec) 1963.

The most important influence on the student's total good health and development is the parent-child relationship. Parents have the primary responsibility for promoting that good health. The physician plays a vital role in enhancing this relationship. His use of preventive medicine in skillful guidance of parents toward the goal of achieving optimum total good health and development is the logical way to promote the student's natural potential in the classroom. Parent, school personnel, and physician conferences and consultations with related disciplines call for a reasonable and coordinative regimen. Each agency has valuable contributions to make and each stands to benefit from the efforts of others in promoting the total good health of the student failing in the school situation.

abstracto

LAGOZZINO, DANIEL A. (3030 Hoyt, Everett, Wash., U.S.A.) Physician's approach to helping the child who is failing in school. Northwest Med 62:951-953 (Dec) 1963.

El factor mas importante sobre el desarrollo y la salud mental y física del estudiante, es la ambiente del hogar. Los padres son primordialmente responsables en este respecto. El médico tiene también un papel vital. Este, guiando a los padres, hacia la meta de alcanzar la salud y el desarrollo óptimo, sigue el método lógico para lograr el mayor rendimiento del estudiante en el salon de clase. Los padres, el personal escolar y el médico, en conjunto, pueden formular un plan coordinado. Cada uno en particular hace contribuciones valuables, y al mismo tiempo se beneficía con los esfuerzos de los otros al fomentar el desarrollo del estudiante que está fallando en la escuela.

Read before Section on Pediatrics, 74th Annual Convention, Washington State Medical Association, Seattle, September 17, 1963.

of a subcommittee report,[3] for problems recognized in the school or brought to the attention of the school by the parent is as follows:

1. A school-personnel conference with parents,
2. School will report the findings and/or observations to the child's physician with the approval of the parents,
3. Recommendation that the child and parent see their doctor,
4. Sharing of the physician's information with school personnel, with approval of the parents,
5. Referral by the physician, when necessary, to individuals offering sub-specialty service including those employed by the school, and the communication of the impressions of those concerned to the parents and (with knowledge of the parent) to a responsible person at the school,
6. Continuing liaison between parents, teacher or other individuals at the school and physician,
7. In those instances where there isn't a family physician, it is suggested that the parents upon referral by the principal avail themselves of one of the physicians who has signified his interest in medically-indigent pupils.[4]

If the problem is first recognized by the physician or brought to the attention of the physician by the parents, the recommended procedure is as follows:[3]

1. Parent conference with physician,
2. Communication between physician and school personnel, with the knowledge of the parent,
3. Physician's medical report to the school personnel or medical officer regarding current medical status—physician's findings and recommendations,
4. Parent conference with school personnel,
5. Physician referral to someone providing specialty service as in 5 above,
6. Continuing liaison, with individuals from each of the three responsible agencies. Accepting the obligation to share with others all relevant information, at all times guarding the privacy of the family by obtaining parental consent for transmission of such information.
7. Communication media: Establish and use routine physician-to-school and school-to-physican report forms. "Fuzzy complex" problems and observations seem to become more simple when the participating authorities make clear comments in writing.

teacher's role

Teachers are in excellent position to observe early failure in the proper performance of student assignments, and consequently, play an important role in calling to the attention of the parents possible problems impairing the learning process. Many teachers have learned to recognize that at times poor deportment or inability to assist and contribute to a group are due to physical handicaps. The student who finds it difficult to see the black board, to hear the spoken word, has a chronic cough, or is fatigued, calls attention to organic problems.

The need for medical supervision is recognized by many of these educators and they are often the first to direct the responsibility of the parent to consult the student's doctor.

why the physician?

Whenever the doctor is confronted by a student with learning difficulties, the pupil should receive an exhaustive investigation from the physician to rule out the unusual causes. These children must have a most thorough medical examination. Many a student's so-called emotional problem will be found, after careful examination, history, and conference, to be due to some undetected physical disease.

During the physical examination and diagnostic investigation, the physician utilizes to good advantage the interest, support, guidance, respect and praise these students need.[5] The teenager is more likely to "open-up" to his physician than to the principal or other school personnel whom he does not know as well. In most instances the doctor has known him since birth and has been called most frequently to act in crises. In any event this visit with the doctor, provided it is a confidential grown-up sort of one with the young adult alone, and providing it gives to the boy or girl adequate opportunity to be listened to, is sometimes the first big step. The interested physician who can be comfortable with these students and their problems can do much to help them with their every day life-adjustment difficulties. They need an adult's respect; they need the privacy such as found in the doctor's office.[6] Later, if another visit or two indicates its desirability, appropriate referral may be made.

discussion

It is generally accepted by all concerned that the student with clear-cut physical problems should not be treated by anyone at the school.[2] One gets the impression that there is no such clear understanding regarding emotional problems.

We recognize that the school is often frustrated by the child who, for reasons of emotional problems, does not make satisfactory progress. Some parents will not assume responsibility for care of these children. Some do not have an attending physician. We see an increase in the number of social service workers, psychologists and guidance counselors who are becoming involved in this area. However:

> "We feel that the child's physician should assume the same responsibility for the child's mental health as for his physical health. We insist that many children's so-called 'emotional' problems, on a careful physical examination and history, are found to be due to undetected physical disease. Many emotional problems are resolved in this way. The child's physician can evaluate the child on the basis of his professional knowledge, his knowledge of the family, the information made available to him from the school, and on the basis of any consultation that may be indicated.
>
> "We must be frank to recognize that some physicians fail to assume responsibility for the total health of the child in this sense. Because of this, the school has been pushed further toward providing services inappropriate for an educational institution and incompatible with the traditional ideas of the doctor's responsibilities."[2]

Yes, the physician can do much to help the child failing in school. He can enhance the most important influence—the primary responsibility of the parents in promoting their child's total good health. In the process of a thorough medical examination he can utilize to good advantage the interest, support, praise and guidance that these students need. He can do much to promote a reasonable and coordinative regimen between parent, physician, school personnel and related disciplines.

summary

1. The most important influence on the student's total good health and development is the parent-child relationship.
2. The parents have the primary responsibility for promoting that good health.
3. The physician plays a vital role in enhancing this relationship.
4. The child's physician's use of preventive medicine in the skillful guidance of parents toward the goal of achieving optimum total good health and development is the logical way to promote the student's natural potential in the classroom.
5. Parent, school personnel, and physician communications or conferences, and consultations with related disciplines call for a reasonable and coordinative regimen.
6. Each agency has valuable contributions to make and each stands to benefit from the efforts of others in promoting the total good health of the student failing in the school situation.■

3030 Hoyt Ave.

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Official Investigation of Death in Oregon

HAROLD T. OSTERUD, M.D. Portland, Oregon

In this paper the author has traced the origin and history of the Oregon Medical Investigation System from the early days of statehood under the now obsolete coroner system to the recently adopted medical investigator system. He has compared the two systems by use of actual case histories and analogies. The basic weaknesses of the coroner system are pointed out and the strength of the medical investigator system gains much from this comparison. In mid-1963 the first fulltime Chief Medical Investigator assumed his duties as administrator of the system. While experience is, as yet, limited, there are many strong points and comparatively few weaknesses evident in the system. With time and experience it is hoped that these may be eliminated and a solidly functioning and fully effectual system be produced.

R. C. HENRY, M.D.
Chief Medical Investigator

A girl, 18, married and four months pregnant, was brought to a hospital emergency room by ambulance attendants at 9:45 p.m. She was cyanotic and pulseless. Open heart massage was unsuccessful. The attending physician notified the medical investigator who promptly came to the hospital to conduct an investigation.

Upon questioning, the husband could offer no explanation of the cause of her death. She was under the care of an obstetrician who reported that she was very healthy, normal, and happy with her marriage and pregnancy.

Earlier that evening, accompanied by her husband, she had eaten a large meal at a local restaurant. Upon returning home, they ate ice cream. At 9:30 p.m., while ironing, the young wife complained of sudden stomach pain. She retired to the bedroom, began undressing and felt faint. She called to her husband. He found her lying on the bed, cyanotic. He attempted artificial respiration. She vomited once while unconscious. Her husband, badly frightened, called the ambulance.

An autopsy, ordered by the Medical Investi-

continued on page 963

abstract

OSTERUD, H. T. (University of Oregon Medical School, Portland, Ore., U.S.A.) Official investigation of deaths in Oregon. Northwest Med 62: 954, 963-966 (Dec) 1963.

Wide spread dissatisfaction with the coroner system resulted in enactment of the Oregon Medical Investigation Law in 1959. The new law provides that the State Board of Health appoint a Chief Medical Investigator to direct the program of local medical investigators. County health officers, appointed by local boards of health, function as local medical investigators. The law specifies conditions under which deaths must be investigated, including many omitted under the old coroner law. Accurate determination of cause of death assists practicing physicians, comforts families, aids law enforcement agencies, serves industry, and reveals homicide or suicide easily overlooked under a coroner system. The new system is designed to protect the individual and the public. It has vastly improved the investigation of deaths in Oregon.

abstracto

OSTERUD, H. T. (University of Oregon Medical School, Portland, Ore., U.S.A.) Official investigation of deaths in Oregon. Northwest Med 62: 954, 963-966 (Dec) 1963.

Disatisfacción con el sistema de "coroner", resultó en una ley nueva con el sistema de médico forense en 1959, en el estado de Oregon. Esta nueva ley dicta que el departamento de Salubridad del estado nombre un Jefe de Investigación Medico-forense quien encarga de coordinar el programa en los municipios.

La ley especifica los casos que deben ser investigados incluyendo varios tipos que eran omitidos en el sistema antiguo. Determinación exacta de la causa de muerte tiene valor para el médico general, consuela a la familia del difunto, ayuda al departamento de policía, sirve a la industria y en casos revela homicidios y suicidos, que tal vez no eran descubiertos con el sistema del "coroner". El nuevo sistema proteje mejor al individuo y la sociedad en general y ha avanzado la investigación forense en el estado de Oregon.

continued from page 954

gator, revealed that the tracheobronchial tube was filled with green to black, muccoid, fiber-like material, resembling undigested food. The stomach contained the same material. No other abnormalities were found. Her death resulted from asphyxiation of vomitis with respiratory insufficiency.

Under the Oregon coroner system, this death would not have qualified as a coroner's case, in that violence, suicide or homicide were not suspected. If the family had refused permission for an autopsy, the cause of death would have remained obscure. However, under the medical investigator system, the circumstances surrounding this death required that it be investigated, and the cause determined.

wide spread dissatisfaction

In recent years such cases have led to dissatisfaction with Oregon's elected coroner system, as frequently expressed by physicians, insurance companies, police, district attorneys, public health officials and the public. In the mid 1950's members of the funeral directors association split over the issue of the coroner system. In the case of the mortician who was elected coroner, the position was lucrative, and other funeral homes desired a slice of the coroner's business. This problem was satisfactorily resolved in some counties but not in others.

As a result of the widespread dissatisfaction, and the desire by public to have the investigation of the cause and manner of death under medical direction, the people of Oregon voted to abolish the elected coroner's position.

A subsequent legislative interim study established the desirability of a medical investigator system. This study was accepted by the legislature, and the Oregon Medical Investigator Law, adopted in 1959, went into effect in 1961. This law abolished the elective position of county coroner in all counties having a population of less than 400,000, effective at the expiration of the incumbent official's term of office.

more investigation required

Requirements concerning death investigation were redefined. County and district health officers, all licensees of the Oregon Board of Medical Examiners, were assigned responsibility as medical investigators for carrying out the provisions of the new law under the supervision of a chief medical investigator appointed by the Oregon State Board of Health.

The Medical Investigator Law requires that death investigations be conducted by the health officer or duly appointed assistant. He is to investigate all deaths occuring under the following circumstances:[1]

1. Death caused by external force, including homicide, suicide, criminal abortion, accident, thermal, chemical, electrical or irradiation injury.
2. Death caused by a suspected hazardous or highly communicable disease.
3. Death caused by or related to deceased's employment.
4. Death of a person unattended by a licensed practitioner of one of the healing arts during the period immediately previous to death.
5. Death occurring in a public or private institution less than 24 hours after admission and not under the care of a licensed practitioner of one of the healing arts during the period immediately previous to admittance.
6. Deaths occurring under suspicious or unknown circumstances.

Upon completion of a death investigation, a report is sent to the county district attorney, and to the Chief Medical Investigator at the Oregon State Board of Health.

The duties of the Chief Medical Investigator include supervising and assisting county medical investigators in all matters relating to death investigation. He utilizes the Oregon State Crime Laboratory or other available laboratory facilities, and the services of pathologists willing to cooperate in the program. It is his responsibility to cooperate with and train peace officers and county or district medical investigators in the medical-legal aspects of investigation.

At the county level, the medical investigator (the county or district health officer) is appointed by the county or district board of health. He may appoint assistants, subject to the approval of the county or district board of health, and authorize them to act as medical investigators when substitutes are needed. The assistants shall possess the same qualifications as the medical investigator. Deputy medical investigators are appointed from the ranks of law enforcement agencies to aid in the criminal or legal aspects of investigations, primarily of violent deaths. In event the medical investigator or his assistant are absent, or if the office is vacant, the Chief Medical Investigator may act, or appoint a temporary medical investigator.

investigation and reports

An investigation may consist of simply viewing the body and getting information regarding the circumstances of death, or it may mean a complete investigation involving police, the district attorney, performance of an autopsy and conduct of toxicological studies. The investigation need not be conducted by the medical investigator personally, but can be carried out at his discretion by his assistant or any one of his deputies.

The detailed report of each investigation includes:[2]

1. The type of death: whether violent, suspicious, unattended by a physician, etc.
2. The manner of death: suicide, homicide, accidental, etc.
3. Age, sex, race, marriage status, occupational and address of the deceased.
4. Date and time the deceased was last seen alive, and the approximate time of death.
5. Death notification by, and body identified by whom.
6. A description of the body as to height, weight, temperature, rigor mortis, livor mortis, fatal wounds, external bleeding, lacerations, contusions, etc.
7. A narrative summary, with medical history or circumstances leading to death, including police reports.
8. Autopsy request and the name of the pathologist performing the autopsy, if autopsy is ordered.
9. Blood alcohol and other laboratory data.
10. Probable cause of death.

Approximately 25 per cent of the 3,500 cases investigated in 1961 and 1962 were autopsied.[3,4] Permission of the family is not required. The medical investigator may prepare a request for autopsy. A competent pathologist, designated by the Chief Medical Investigator, is requested to perform the autopsy. A request-for-autopsy form includes a summary of the circumstances surrounding the death, and authorizes the pathologist to proceed. The pathologist sends copies of his report, including any toxicological studies, if done, to the Chief Medical Investigator, the county medical investigator and the district attorney.

contrast

In contrast, the Oregon coroner system as established in 1894, defined the coroner's responsibilities as follows:

> "When the coroner is informed or ascertains that a person has been killed or dangerously wounded by another, has suddenly died in such circumstances as to afford a reasonable ground to suspect that his death was occasioned by criminal means or has committed suicide, the coroner shall immediately report the matter to the district attorney of his county, cause the body of any such deceased person to be placed under strict guard, free from the interference of any unauthorized person, until released by order of the district attorney, and if directed to do so by the district attorney, order an autopsy or an inquest to be held upon the body of such person or concerning his death, or both. For these purposes he shall secure expert services for making the autopsy or holding the inquest."

The law did not require a coroner to have special training in forensic matters. Although a coroner was required to investigate these deaths, he lacked authority to order autopsies. This power was vested in district attorneys, but only in deaths from suicide, violence, or suspected foul play. Accordingly it was necessary for coroners to request district attorneys to order autopsies. The laws which regulated his duties did not define precisely the cases under his jurisdiction.

The coroner law did not require investigation of non-violent deaths except when the death occurred under circumstances indicating suicide or foul play.[5] Many deaths needing investigation were not covered by the coroner law. Deaths unattended by physicians or occurring in institutions before diagnosis could be made, or caused by the deceased's employment, were not investigated. The county health officer, as the registrar of vital statistics, was required to determine cause in such cases but lacked authority to order an autopsy.

assistance to physicians in practice

The investigation of non-violent death of undetermined cause by the medical investigator will assist physicians in practice. For example, a pediatrician was called to see a two-year-old boy with symptoms of an upper respiratory infection. He had an inflamed throat, a fever of 103 F and was treated with penicillin and aspirin. The boy's fever subsided and he appeared to be recovering. Twelve hours later the child developed convulsive movements of his arm and was rushed to a hospital. He was dead on arrival.

The pediatrician, very distraught at losing the child, notified the medical investigator. The mortician was instructed not to embalm the body so that cultures could be taken. An autopsy, performed an hour later, revealed the cranial cavity filled with yellow purulent material. *Hemophilus influenzae* organisms were cultured from this material. At no time during the short course of his illness did the child manifest any central nervous system symptoms, including a stiff neck, until the convulsion shortly before death.

The autopsy findings were of value in that they demonstrated the rapidity with which *H. influenzae* meningitis can kill in the absence of any central nervous system symptoms. The medical investigator was able to explain the cause of death to a hostile family, possibly averting a law suit.

comfort to families

The families of individuals who die unexpectedly, can be helped and comforted when the cause of death is explained to them. Parents of a child who has "suffocated to death" frequently have deep feelings of guilt, believing "we should have been able to prevent it." In 1961, of six cases of presumed suffocation involving infants, only one actually was due to suffocation. The other five were due to interstitial pneumonia.

A typical case occurred at 3:30 one morning when a mother was awakened by her three-month baby's fussing. She got up, wiped his nose, turned him over on his stomach, and went back to bed. At 7:30 the mother checked on the baby, noticed his eyes were wide open, and thought he was awake but quiet. On returning with his formula, she discovered that "my baby suffocated." At autopsy, the findings were acute focal bronchopneumonia, interstitial pneumonia and hemorrhagic pulmonary edema.

The preceding case also demonstrates one of the many research areas for cooperative studies between physicians and the medical investigator's office. The investigation of the death supposedly due to a heart attack is another important area for research. Deaths from coronary occlusions were responsible for over 50 per cent of all non-violent deaths requiring medical investigation.

Frequently no medical history can be obtained, as was the case in the death of a 45 year-old female, supposedly in good health. She was found by police in her wrecked car. On examining the body, the medical investigator found no injury serious enough to cause death. Her automobile was only slightly damaged. An autopsy showed advanced coronary atherosclerosis with occlusion of the anterior descending coronary artery. Elimination of accidental death was of importance to the insurance company covering her.

cooperation with law enforcement agencies

The medical investigator system involves close cooperation with law enforcement agencies and the district attorney's office. The deputy medical investigators are trained police officers or deputy sheriffs, appointed by the medical investigator. All state police officers, by law, have the same powers as do deputy medical investigators.

Law enforcement officers are not involved in all death investigations. Deaths occurring in hospitals under 24 hours or deaths without medical attention usually do not involve the police. All cases of violent death or deaths under suspicious circumstances involve law enforcement personnel. The district attorney is notified by phone in any case involving possible litigation or prosecution.

Most cases of violent death are under police investigation by the time the medical investigator is notified. The following case illustrates the role of the police officer acting as the deputy medical investigator. A delivery boy found a man lying on a sidewalk at the entrance of a driveway. He immediately notified the police who sent a patrol car to investigate. The patrolman examined the body of a 77 year-old white male with multiple lacerations and abrasions. His clothing was badly torn. The patrolman called police headquarters, notifying the deputy medical investigator and the medical investigator.

On arriving at the scene, they met the owners of the home near the location of the death. The owner's wife, shortly before, had backed out of their driveway to pick up her husband after work. She explained that she "didn't hear or see anyone," and emphatically denied any possibility of having run over the victim.

There were no tire marks on the victim's body, but the marks on the grocery sack he was carrying matched the tread of the tires on her car. The automobile, a new model, was impounded and taken to a garage for inspection. Small remnants of the victim's clothes were found attached under the car. Blood on the oil pan matched the victim's type. He had been crushed against the sidewalk by the oil pan of the car.

An autopsy revealed the cause of death to be a crushing injury to the chest with fractures of all 24 ribs, intrapleural hemorrhage, and hemorrhagic pulmonary edema. The victim had cataracts with virtually no vision in one eye.

The medical investigator held a conference with the police and district attorney. The death was classified accidental and no hit-and-run charges were filed. The driver was unaware that she had hit the elderly man who, because of faulty vision, walked behind her car.

occupational hazards

The investigation of all deaths resulting from employment will assist industry in improving safety standards. The establishment of the manner and cause of death is important in the consideration of insurance and state industrial accident claims.

The death of a 32 year-old elevator repairman will illustrate the value of investigating this type of death. He was working beneath a heavy freight elevator in a grocery store. The elevator fell less than six feet, pinning the repairman against a concrete floor. He was released in 25 minutes by firemen and police. No apparent fatal wounds were visible. A physician, shopping in the store, pronounced him dead and called the medical investigator. An autopsy revealed acute congestion of the lungs and acute pulmonary edema. There were no fractures or crushing injuries. Death resulted from asphyxia due to immobilization of the chest. The elevator fell when the repairman accidently loosened a nut on the hydraulic fluid line, allowing the fluid to escape. Prior to the accident he was advised to place protective shoring under the elevator. He disregarded this simple protective measure which would have saved his life.

homicide and suicide

It has been alledged that homicides may escape detection under the coroner system as many cases of death are written off as due to natural causes or not investigated at all. The homicide or suicide resulting from violence is not as likely to escape detection and investigation as is the non-violent one. The latter type of death, not usually investigated by the coroner, offers more opportunity for a homicide or suicide to go undetected.

Under the medical investigator system, with revised requirements for the investigation of all deaths unattended by a physician, or occurring under suspicious or unknown circumstances, should materially reduce the possibility of the undetected homicide or suicide. With the power to order autopsies, the medical investigator is no longer restricted, as were the coroner and district attorney, to the violent or suspicious death. Working cooperatively with morticians, blood samples, tissues, and cultures may be obtained prior to embalming, further decreasing the chance of an undetected homicide.

Investigation of certain types of death is important to the physician in establishing cause of death. The perplexing case that dies in less than 24 hours in a hospital, an undiagnosed infectious disease resulting in death, or a death that looks suspicious are examples. The physician in attendance, or the hospital at which the death occurred, should report such cases immediately to the medical investigator. Time is of the essence in obtaining good toxicological, bacterial or viral specimens. Prompt reporting will facilitate the work of the medical investigator.

The accurate determination of the cause and manner of death is of utmost importance. The death certificate establishes the fact of death, and serves as the legal document for settling of estates and insurance claims. Mortality statistics are widely used for research purposes, program planning as in chronic disease or communicable disease, and in establishing insurance rates. As the accuracy in determining causes of death improves, mortality statistics will become more reliable and useful.

The medical investigator system is designed to protect and aid the public and the individual in society. The legal, criminal or civil aspects of the investigation of death are the responsibilities of law enforcement officials. The determination of the cause and manner of death is a medical problem. For the first time, the legal and medical aspects of the official investigation of death have been incorporated in the newly established Medical Investigator System, improving the investigation of death in Oregon. ■

3181 SW Sam Jackson Park Road (1)

REFERENCES

1 Oregon State Revised Statutes 146.005 - 146.990, Investigations of Death.

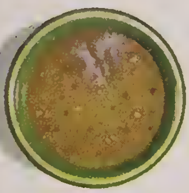
2 Medical Investigators and Coroner Data, exclusive of Multnomah County obtained from the office of the Chief Medical Investigator at the Oregon State Board of Health.

3 Multnomah County Data from the office of the Multnomah County Coroner.

4 Mortality Data from the Vital Statistics Section, Oregon State Board of Health.

5 Lidbeck, William L., The medical investigative program in Oregon, Northwest Med 60:593-596 (June) 1961.

How many make a bowl of soup, Doctor?



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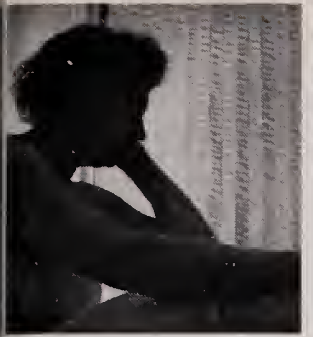
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Tension headache

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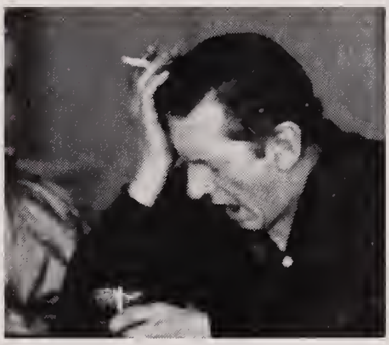
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*Scal, J. C.: Eye Ear Nose & Throat Month. 38:738 (Sept.) 1959.

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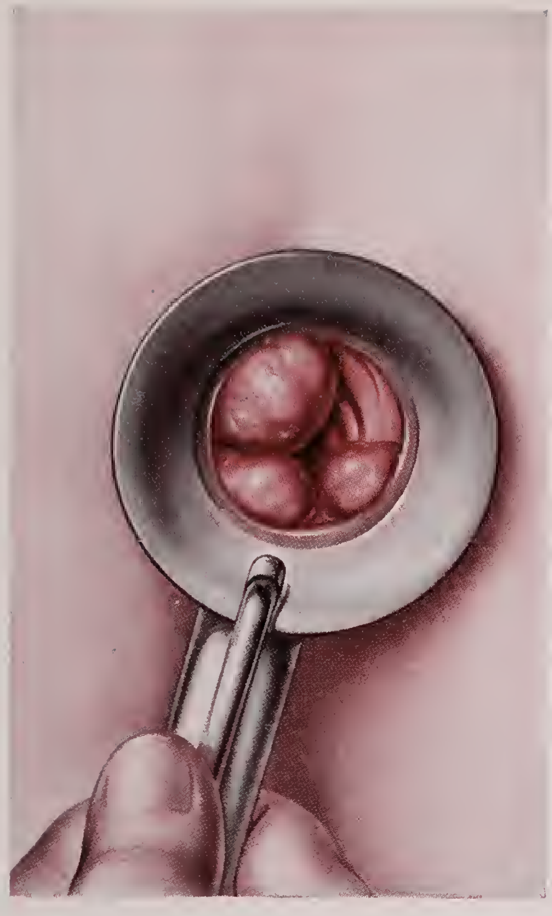

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*U.S. Department of Health, Education and Welfare, Public Health Service Publication No. 813.

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BOOKS

RECEIVED: The following books have been received. Publication of this acknowledgement is to be considered adequate return to the sender. Selected titles will be reviewed as space permits.

Dystrophia myotonica and related disorders. By J .E. Caughey, M.D. (N.Z.), F.R.A.C.P., F.R.C.P. (London). 282 pp. Illustrated. Price $10.00 Charles C Thomas, Springfield, Ill. 1963.

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Impotence and frigidity. By Donald W. Hastings, M.D., Professor and Chairman, Department of Psychiatry and Neurology, The Medical School, University of Minnesota. 144 pp. Price $5.50. Little, Brown and Company, Boston. 1963.

Crossen's synopsis of gynecology. By Daniel Winston Beacham, M.D., Associate Professor of Clinical Obstetrics and Gynecology, Tulane University School of Medicine, New Orleans, and Woodard Davis Beacham, M.D., Professor of Clinical Obstetrics and Gynecology, Tuland University School of Medicine, New Orleans. 371 pp. Illustrated. Price $7.50. The C. V. Mosby Company, Saint Louis. 1963.

Human sex and sex education, perspectives and problems. Warren R. Johnson, Ed.D., Professor and Head of Health Education, University of Maryland, College Park, Maryland. 205 pp. Price $4.50. Lea & Febiger, Philadelphia. 1963.

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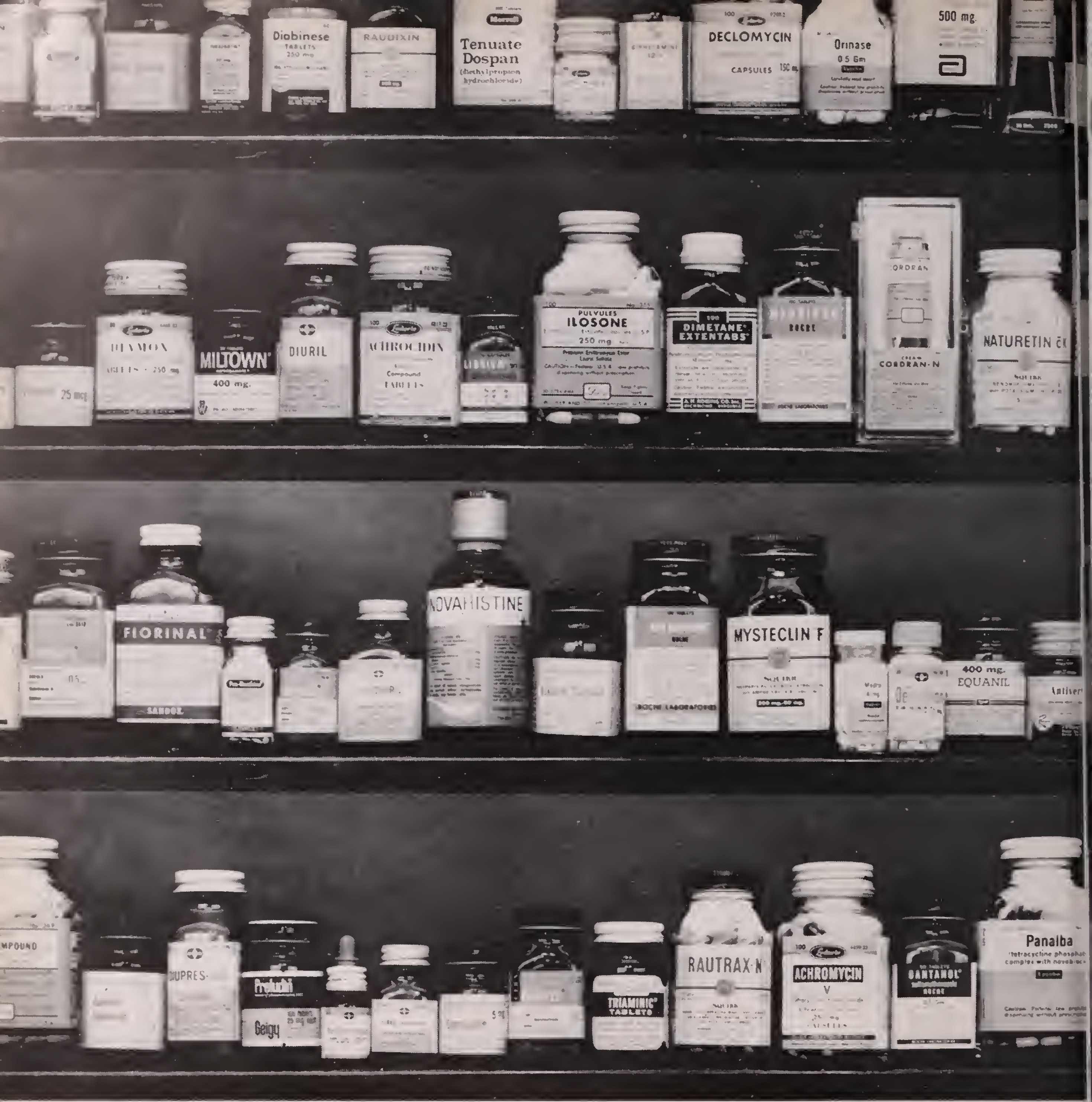

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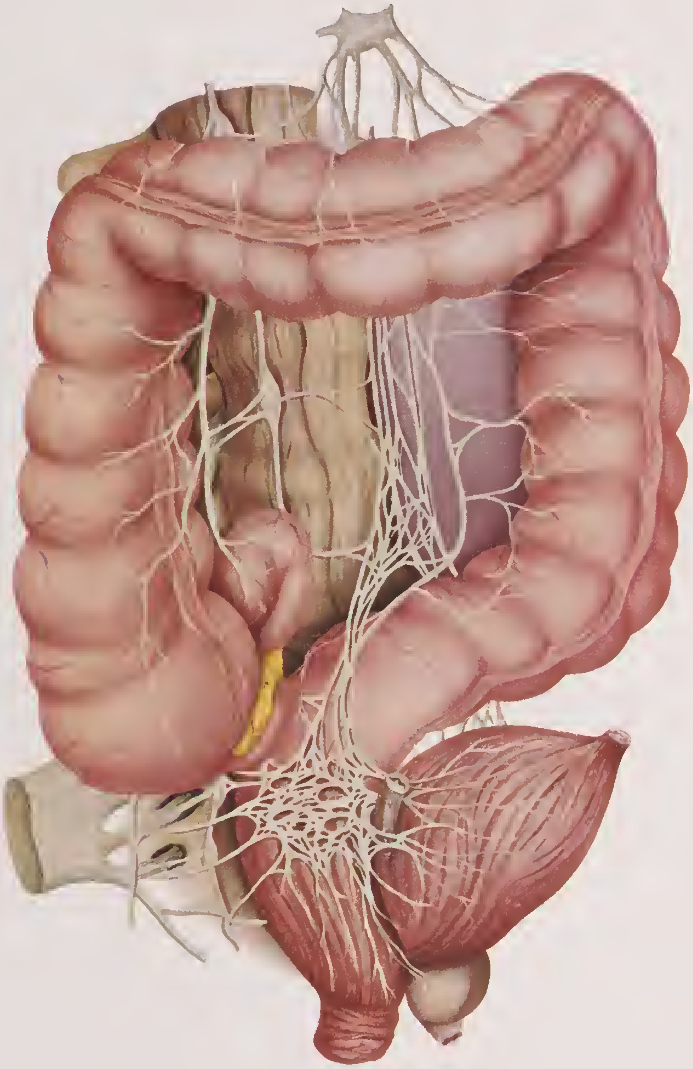

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General Practice Postgraduate Courses

Oregon Academy of General Practice has announced the 1964 program of general interest postgraduate courses:

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For specific information on these courses write to Vicki Burns, 3405 S.W. Caroline Street, Portland 1, Oregon.

Tension Control Society Installs Officers

George A. Davidson of Vancouver, British Columbia, has been installed as president of the American Physicians Society for Physiologic Tension Control, succeeding Edmund Jacobson of Chicago.

Other officers chosen at the second annual meeting in Vancouver are: President-elect, Henry H. Dixon, Sr., Portland, Oregon; secretary-treasurer, Herman A. Dickel, Portland, Oregon; executive committee (one year), George Whatmore, Seattle; (two years), Dr. Jacobson; program chairman, Gerhard B. Haugen, Portland, Oregon.

Medical Examiners telephone number changed

The telephone number of the Board of Medical Examiners of the State of Oregon has been changed to: 226-2161, Extension 431, Area code 503. After 5:00 p.m. and on Holidays and Sundays the number is: 226-3194 Area code 503.

A private business firm inherited the old number, CA 8-8476, and it receives a number of local and long distance calls daily which are Board calls. This firm has been very patient but has appealed for help since the matter of time has not solved the problem.

The Board of Medical Examiners will appreciate it very much if you will print a notice of the new telephone number in house organ, bulletins, monthly publications and journals.

Please record the new number for future reference.

Oregon Thoracic Society elects

Robert D. Michel, chief of medical services at the state tuberculosis hospital at Salem is the newly elected president of the Oregon Thoracic Society. Other new OTS officers include Ambrose S. Churchill, first vice-president; John W. Bussman, second vice-president; and Robert W. Toon, secretary-treasurer, all of Portland. Mr. Don Harman, OTHA case-finding director is staff coordinator.

The OTS, medical section of the Oregon Tuberculosis and Health Association, was organized in May, 1958, and now has a membership of 135 Oregon physicians. Membership is open to any physician in the state.

OBITUARIES

DR. A. O. SCHMITT, *who had practiced in Brookings for 18 years, died August 3. Born in Wisconsin, he graduated from State University of Iowa College of Medicine in 1908. He was licensed in 1916, and prior to moving to Brookings in 1945 had practiced in Portland. Dr. Schmitt was one of the original staff of Shrine Hospital in Portland. He was 85.*

DR. RANDALL F. WHITE, *a native of Portland, died October 30. In 1918, he was graduated from the University of Oregon Medical School, and in 1919 he was licensed to practice in Oregon. From 1929 to 1930 he served as medical director of the Near East relief in Turkey, Russia and Greece. Dr. White, Multnomah County physician since 1941 was 71.*

DR. RACHEL SPARKS-KEETON, *who had practiced in Portland for 15 years, died in Seaside on August 24. She was 64. Previous to her practice in Portland, from which she retired in 1951, she had served as a health service doctor in Kansas and at Corvallis. She was a graduate of the University of Minnesota Medical School in 1924. Death was due to a myocardial infarction.*

DR. KENNETH C. BROWN, *55, a veteran of World War II, died October 11 in Portland. His degree was granted by the University of Oregon Medical School in 1934. Dr. Brown interned at Multnomah County Hospital and served his residency at Salt Lake City LDS Hospital prior to the War. He had practiced in Portland for approximately 24 years.*

DR. CLAIR WILCOX, *who practiced in Portland before moving to Long Beach, California, in 1957, died August 18. Born in Fond du Lac, Wisconsin in 1879, he graduated from the University of Oregon Medical School in 1910. He was retired.*

DR. GEORGE W. SETZER, *of Rainier, Oregon, died August 25 of coronary thrombosis. He was 69. Dr. Setzer graduated from Rush Medical College in 1925.*

DR. W. DONALD NICKELSEN *of Sellwood, Oregon, widely known for his interest in hunting, died on October 23. He was 69. A graduate of Rush Medical College in 1920, he had once owned and operated the Portland General Hospital. Since 1946 he had served as president and as medical director of the hospital.*

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EXECUTIVE SECRETARY *Mr. A. L. Bird, Boise*
annual meeting June 17-20, 1964, Sun Valley

Officers and Councilors meet

The first meeting of the association Officers and Councilors since June was held at Sun Valley, October 4 and 5.

President Paul B. Heuston, Twin Falls, presided at the two-day session during which time many association activities of the past few months and plans for future work were approved.

Attending the session were: President-Elect Corwin E. Groom, Pocatello; Immediate Past-President Manley B. Shaw, Boise; Secretary-Treasurer A. Curtis Jones, Boise; A.M.A. Alternate Delegate Donald K. Worden, Lewiston; Councilors John M. Ayers, Moscow; William B. Jewell, Emmett; James R. Kircher, Burley, and O. D. Hoffman of Rexburg.

Rocky Mountain Medical Conference

Rocky Mountain Medical Conference in Las Vegas, October 30—November 2, held in conjunction with the annual meeting of the Nevada State Medical Association, was an excellent session and was attended by more than 400 physicians. Twenty-two from Idaho signed in at the Registration Desk.

Paul B. Heuston, Twin Falls, President of the Idaho State Medical Association, presided at the afternoon scientific session on opening day. V. Ellis Knight, Kimberly, Chairman of the Idaho Conference Committee, and Executive Secretary, Mr. Armand Bird, also attended the meeting.

The next session of the Conference will be in Santa Fe, New Mexico in 1965.

District Medical Society elects

New officers of the Southwestern Idaho District Medical Society for the coming year are:

President, Harold W. Brown, Nampa; Vice-President, Charles E. Krause, Caldwell; Secretary, John B. Clauser, Nampa; Treasurer, Elizabeth L. Munn, Caldwell, re-elected; Council Member, W. B. Ross, Nampa; Delegates, William B. Jewell, Emmett; Charles E. Krause, Caldwell, 1964; John F. Stecher, Caldwell; and Samuel C. Taylor, Nampa, 1965; E. R. Carlsson, Nampa; and Kenneth E. Droulard, Nampa, 1966, re-elected.

Idaho Hospital Association

New members of the Idaho Hospital Association elected at their annual meeting at Sun Valley in October are President, Mrs. Steve Lee, Business Administrator, Gooding County Memorial Hospital, Gooding; President-Elect, Mr. L. Clay Boyd, Business Manager, Gritman Memorial Hospital, Moscow; Secretary-Treasurer, Mr. E. E. Gilbertson, Administrator, St. Luke's Hospital, Boise.

State Board of Medicine section

Chairman S. M. Poindexter, Boise, attended the annual meeting of the Association of American Medical Colleges in Chicago, October 24-30 at the Sheraton Hotel. Dr. Poindexter is a member of the AAMC Committee on Licensure Problems on which James E. McCormack, Dean of Seton Hall College of Medicine and Dentistry, Jersey City, N.J., is Chairman.

Two physicians applied for and received Temporary Licenses during October. They are:

L. Floyd Hobbs, Moscow, graduate of the University of Virginia School of Medicine, Charlottesville, M.D. Degree June 14, 1932. Internship at the University of Virginia Hospital 1932 to 1933. Granted TL-317 October 14, 1963, Student Health Service, University of Idaho.

Lyle L. Stones, Caldwell, graduate of the Emory University School of Medicine, Atlanta, Georgia. Internship at William Beaumont General Hospital, El Paso, Texas 1957 to 1958. Internal Medicine Residency, Walter Reed General Hospital, Washington D.C., 1958 to 1961. Granted TL-318 October 29, 1963, Internal Medicine.

Idaho Division—American Cancer Society

Robert E. Lloyd, Boise, has been re-elected President of the Idaho Division, American Cancer Society. Other physicians elected to the Board of Directors at the organization's annual meeting include James C. F. Chapman and Terrell O. Carver, Boise.

Physicians serving on the Board of Directors of the society include Robert E. Staley, Kellogg; Roland D. Brooks, Moscow; A. Eugene Pflug, McCall; Samuel C. Taylor, Nampa; Marion V. Klingler, Gooding; Eugene H. Holsinger, Burley; Zach A. Johnson, Salmon; Jay P. Merkley, Pocatello; O. R. Cutler, Preston; Taylor H. Carr, Idaho Falls; Robert R. Klamt, St. Anthony; Quentin E. Howard, Boise; A. William Kendall, Twin Falls; Clark T. Parker, Pocatello; E. R. W. Fox, Coeur d'Alene; Frank W. Crowe, Boise; James H. Bauman, Lewiston, and Blaine H. Passey, Rexburg.

Alfred M. Popma, Boise, is an honorary life member of the Board of Directors of the Society.

OBITUARIES

DR. WILLIAM M. MITCHELL, *who had practiced in Parma, Idaho, for 32 years, died October 20 at 84 years. A native of New York, he received his degree from University of Maryland School of Medicine in 1905. He was issued his license to practice in Idaho in 1910 and began practice in Weiser that same year. Following his retirement in 1950 he had lived in Caldwell.*

DR. ROBERT E. DUNLAP, *87, a veteran of the Spanish American War, died in Twin Falls on October 14. His degree was granted by Rush Medical College in 1902, he was licensed to practice in Idaho in 1905. He had practiced in Mohler and Oregon prior to moving to Craigmont, where he practiced from 1915 until his retirement in 1945.*

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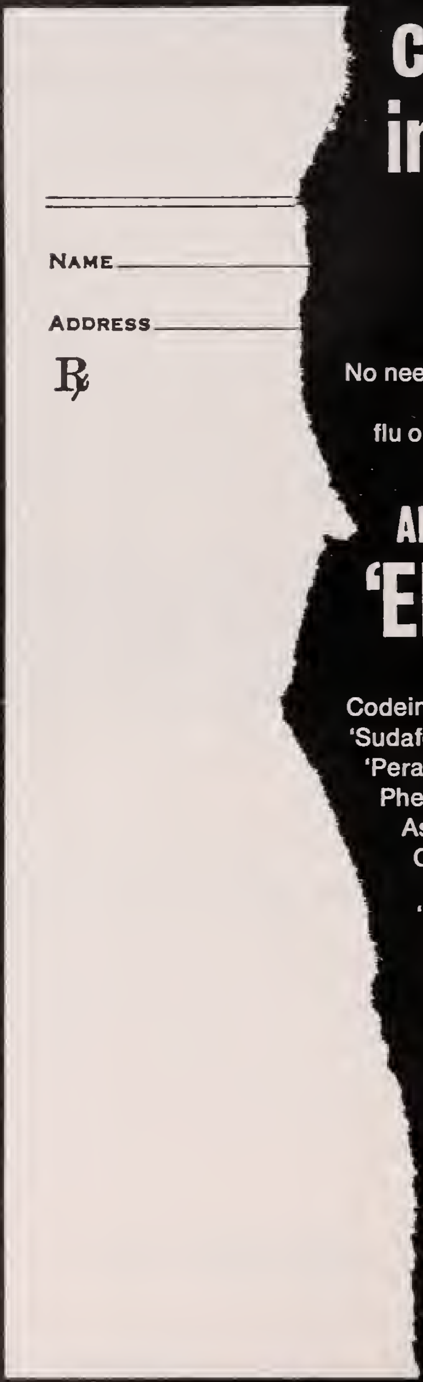

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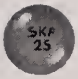

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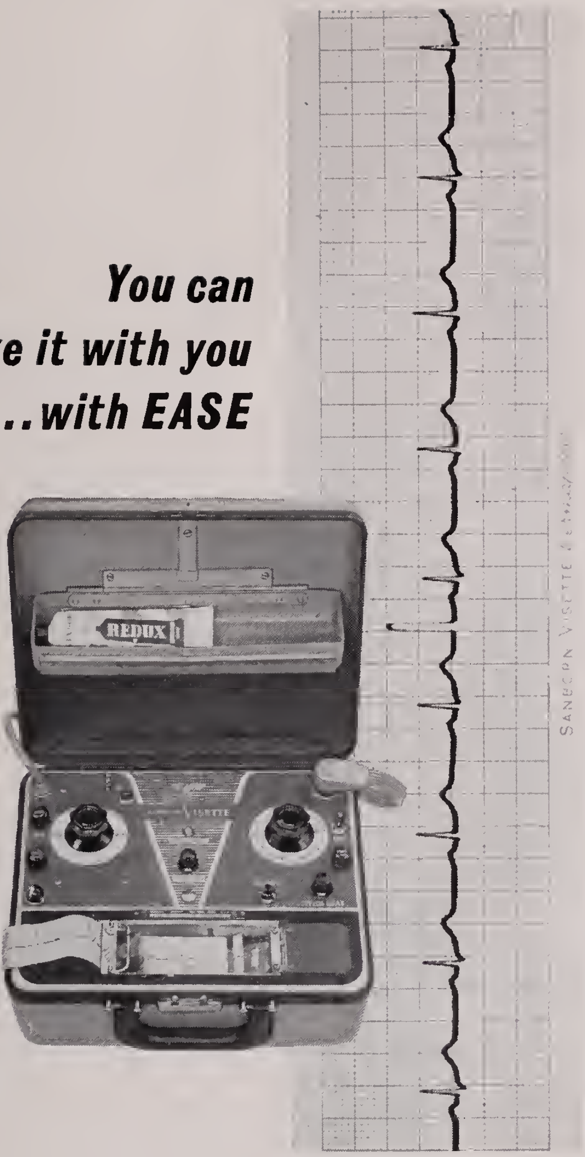

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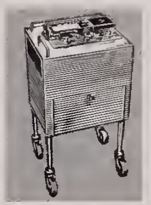

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AMA Clinical—Miami Beach, Nov. 29-Dec. 2, 1964.

Idaho State Medical Association—June 17-20, 1964, Sun Valley.

Northwest Soc. for Clin. Research—Jan. 10-11, 1964, Vancouver, B. C.
Pres., Denys K. Ford, Vancouver
Sec., R. E. Beck, Vancouver

Oregon State Medical Association — Oct. 13-17, 1964, Eugene

Washington State Medical Association—Sept. 13-16, 1964, Seattle.

West Coast Allergy Society, Dec. 5-7, 1963, Las Vegas, Nevada
Pres., M. Coleman Harris, San Francisco
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Pres., Sheldon Walker, Portland
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Oregon District Branch of American Psychiatric Association
Pres., Emanuel I. Silk, Pendleton
Sec., Henry H. Dixon, Jr., Portland

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Oregon Radiological Society—University Club, Portland, 2nd Wednesday through school year
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Ore. Soc. Obst. & Gynec.—Portland, Park Heathman, 3rd Fri. (Oct., Nov., Jan., May)
Pres., W. L. Hartmann, Portland
Sec., T. A. Treanor, Portland

Oregon State Society of Anesthesiologists—Portland, 3rd Friday (except June, July, Aug.)
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Seattle Academy of Surgery—3rd Wed. bi-monthly; Seattle Yacht Club.
Pres., E. B. Parmelee
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Seattle Gyn. Soc.—3rd Wed. exc. June, Aug., Dec., Feb.
Pres., D. M. McIntyre, Seattle
Sect., E. T. MacCamy, Seattle

Seattle Pediatric Society—3rd Friday (Sept.-May), College Club
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Pres., Eric Sanderson, Seattle
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Spokane Society of Internal Medicine—Quarterly, Rockwood Clinic Annual—Mar. 7, 1964
Pres., Loren Gothberg
Sec., Arch Logan, Jr.

Tacoma Academy of Internal Medicine—4th Tuesday (Sept.-May)
Pres., R. A. Kallsen
Sec., R. A. O'Connell

Tacoma Surgical Club—May 2, 1964, 3rd Tuesday (Sept.-May)
Pres., Dumont Staatz
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Washington Academy of Clinical Hypnosis—3rd Friday (Sept.-June)
Pres., Tom Wall, D.M.D., Seattle
Sec., John E. Nelson, Seattle

Washington Academy of General Practice—Tacoma, May 14-16, 1964
Pres., Duncan Robertson, Seattle
Sec., John Gahringer, Wenatchee

Washington State Radiological Society—Seattle, Quarterly
Pres., W. A. Chesledon, Seattle
Sec., R. H. Rosenberg, Seattle

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Pres., Lucien Morris, Seattle
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Wash. St. Soc. of Allergy
Pres., Alexander Altrose, Seattle
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Yakima Surgical Society—Last Thursday (Sept.-May)
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NORTHWEST MEDICINE

Volume 62, January - December 1963

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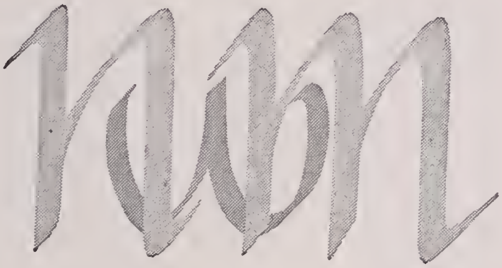

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